OSPREY COMBAT AIRCRAFT • 33

B-29
SUPERFORTRESS UNITS OF WORLD WAR 2

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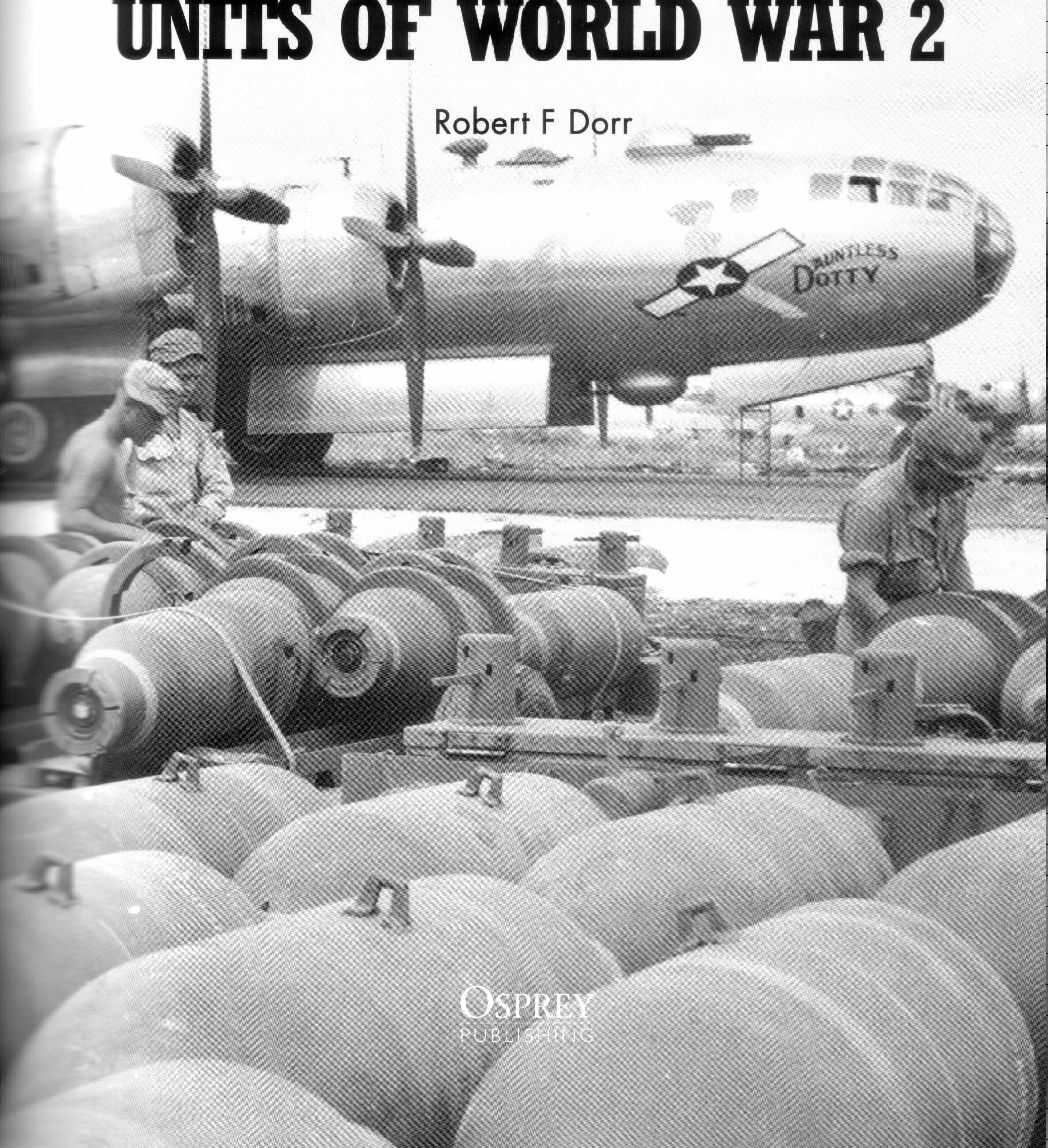
DAUNTLESS DOTTY

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When the Boeing B-29 Superfortress made its combat debut, against the Makasan railway depot in Bangkok, Thailand, on 5 June 1944, halfway around the world the Allies were preparing to assault the beaches of Normandy. The press found a little space for headlines about the giant, cigar-shaped bombers of the 58th Bombardment Wing (BW), but not a lot.

The Superfortresses, some olive-drab, some in natural metal, flew from Kharagur, in India, on a round-trip of about 2000 miles (3200 km). They demonstrated that the B-29 could carry bombs a long way, but that was about it. Their baptism of fire produced almost no results.

The Bangkok raid was a crude beginning. Nine months later on the night of 9 March 1945, an armada of 380 Superfortresses that had been designed with scrupulous care to operate at very high altitude, attacked Tokyo at low level with incendiary bombs. They ignited the hottest fires ever to burn on this planet. They transformed 16 square miles of the Japanese capital into a desert. They killed 100,000 human beings.

Five months later on 6 August 1945, a lone B-29 struck Hiroshima from high altitude with a single uranium U235 gun-type atomic bomb, flattening about five square miles of the city and killing about 70,000 people. Days later, another B-29 diverted from its primary target of Kokura to drop a plutonium implosion weapon on Nagasaki.

The firebomb raids, the atomic bombs and the relentless campaign by hundreds of Superfortresses that kept coming back again and again, day and night, week after week, month after month, spelled final defeat for the Japanese Empire. Plans were afoot for Operation *Olympic-Coronet*, a two-pronged amphibious invasion of the Japanese home islands that might have made Omaha Beach look like a Sunday-school picnic. The second big invasion of the war never took place. It was never needed.

This narrative will follow the B-29 and its crews to the skies of Japan and stay with them to the end of the war. It was a voyage of discovery. In 1944, the term 'jetstream' was unknown, and US intelligence officers were dumbfounded by the furious winds at high altitude over Japan that were sometimes strong enough to flip a 124,000-lb (56,245-kg) B-29 on its back and crinkle it like paper. No one had ever done battle at such heights on a sustained basis. And as this tale will tell, those winds almost defeated the B-29 when the Japanese could not. The aerial campaign finally gathered momentum only after it was brought down to lower level.

PEDIGREE BOMBER

The love–hate story of the B-29 begins with an aircraft manufacturer in the Pacific Northwest. Boeing's talent for turning out huge aircraft paid a super dividend with the Superfortress, but only after teething troubles were dealt with. It was hardly surprising that the company would achieve success. In later years, a national poll in the US showed that the predecessor of the B-29, the Boeing B-17 Flying Fortress, was one of the most readily recognised aircraft in the history of aviation, surpassing the Douglas DC-3, Supermarine Spitfire and Boeing 747.

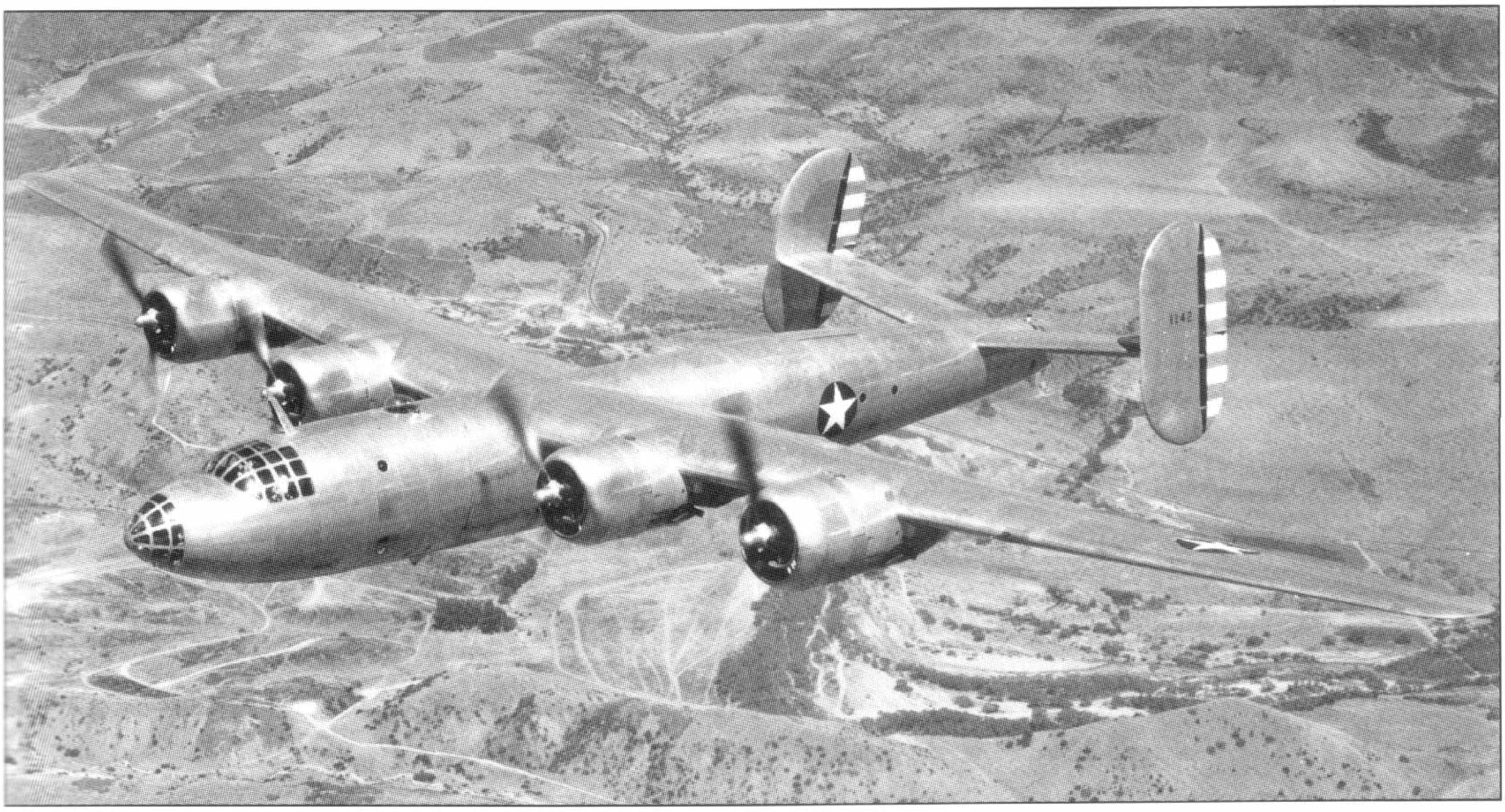
The Superfortress was, in its day, the most advanced bomber in the world. But it did not emerge from the production line, or enter service with the Army Air Forces (AAF), or make its debut in combat, without a long period of trial and tribulation. Designing, developing and fielding the B-29 was an enormous challenge both for Boeing and the AAF.

In October 1938, Army Air Corps (AAC) chief of staff Oscar Westover established a requirement for a superbomber. The US was already ahead of much of the world in developing long-range, four-engined bombers, but Americans often behave as if they do not understand their own achievements. For a brief period, the AAC (which became part of the AAF in 1941) actually entertained the creaky, twin-motored Douglas B-18 – a completely inadequate military aircraft derived from a transport design – as its primary bomber. The error was quickly corrected, four-engined B-17 Flying Fortresses began reaching the Army before Pearl Harbor and the US assumed a leadership role in the big bomber business.

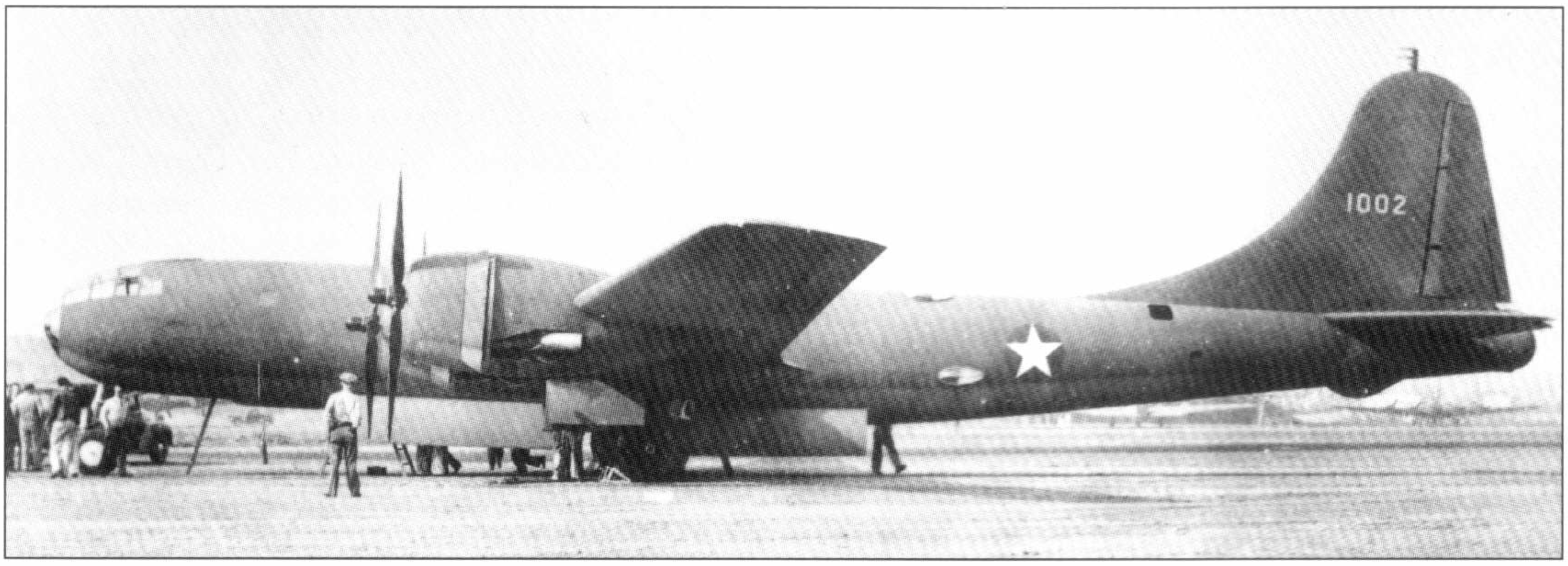
Even then, the B-29 represented a giant leap forward. The AAF chose it in preference to the Lockheed XB-30, a derivative of the Constellation airliner, and the Douglas XB-31, a distant relative of the C-54 Skymaster. Yet another competing aircraft design, the Consolidated XB-32, became the production B-32 Dominator, and a worthy back-up to the B-29. But the XB-32 was a modest step forward. The Superfortress was a giant leap.

The men behind the B-29 moved boldly with their ambitious new bomber. The AAF ordered 1500 Superfortresses before the first aircraft had even flown. The haste of the programme, coupled with the size and revolutionary features of the B-29, meant inevitable problems.

Boeing turned out three XB-29 prototypes. The first (41-002) went aloft on 21 September 1942, with renowned test pilot Edmund T 'Eddie' Allen doing the honours at Boeing's Seattle facility. Neither Allen nor anyone else on the scene could have imagined that fully 21 months would pass before the Superfortress entered combat.



Although Americans at times seemed seduced by the notion of the four-engined bomber, the AAF decided not to proceed with the Lockheed XB-30 and Douglas XB-31. The Consolidated XB-32, however, was another story. Here, the second of two XB-32 test ships flies near the Consolidated plant at San Diego, California, on 20 July 1943. The production version, the B-32 Dominator, went into action with the 312th BG in the Philippines in the final weeks of the war, but as it turned out a back-up to the B-29 Superfortress was not needed. (*Consolidated*)



Aircraft 41-002 was the first of three XB-29 bombers to be built by Boeing. With renowned test pilot Eddie Allen at the controls, it made its first flight on 21 September 1942 painted in olive-drab. The prototype was also fitted with three-bladed propellers and lacked gun turrets – these would be fitted later. The tail bumper, small gunners' windows and larger rudder were characteristic of the XB-29. Christened the Superfortress, the new bomber would be able to strike from high altitude, although initially there were serious technical problems that had to be resolved. (*via David Ostrowski*)

Allen, who tested numerous prototypes built by several companies, was among those who lost their lives when the second XB-29 (41-003) crashed on 18 February 1943. This catastrophic incident was one of a rash of B-29 accidents caused by engine failures and fires.

What happened to pilot Eddie Allen? The goals of this particular test flight were to measure climb and level flight performance, and seek engine-cooling data with numbers two and four engines operating. Because of troubles that had been encountered with low engine nose oil pressures at high altitude, this flight was to be limited to 25,000 ft (7620 m). Allen's job was to evaluate the effectiveness of 'fixes' for some of the past problems. He took off at the XB-29's design gross weight of 105,000 lb (47,626 kg) with full fuel tanks – 5410 US gallons of aviation fuel.

Eight minutes after take-off, and while climbing through 5000 ft (1524 m) with rated power, someone reported a fire in the number one engine. Allen cut mixture and fuel to the engine, feathered the propeller, closed the cowl flaps and discharged a fire extinguisher bottle. He then began a descent toward Boeing Field. Since the fire appeared to have been extinguished, and the bomber seemed to be under control, Allen planned a routine landing from the north on Runway 13, rather than making a downwind landing on the 5200-ft (1584-m) runway with a heavy aircraft. The radio operator reported descending through 1500 ft (457 m) at a point four miles (six kilometres) north-east of the field. Aircraft 41-003 was on the downwind leg, starting a left turn onto base leg.

Two minutes later, witnesses on the ground heard an explosion, and a piece of metal fell from the XB-29. The radio operator, who could see into the forward bomb-bay and the wing centre section front spar, was overheard by Boeing tower on an open microphone to say, 'Allen. Better get this thing down in a hurry. The wing spar is burning badly'. He told Boeing Radio on a different frequency, 'Have fire equipment ready. Am coming in with a wing on fire'. A mile down the flight path from the explosion, burned parts of a deicer valve, hose clamps and instrumentation tubing were later found.

Allen's B-29 turned south on an oblique final approach in a desperate effort to reach Boeing Field, which was only three or four miles away. It was at an altitude of less than 250 ft (76 m). Witnesses later said that part of the wing leading edge was missing. In the next mile the flight engineer's data sheet was found, and three of the forward compartment crew members left the aircraft – too low for their parachutes to open.

At 1226 hrs, three scant miles from Boeing Field, the XB-29 crashed into the Frye Meat Packing Plant, killing pilots Eddie Allen, Bob Dansfield and the remaining six crew members on board. The crash and resulting fire killed an additional 20 people on the ground, and destroyed much of the aeroplane and the plant. There was clear evidence that fire and dense smoke had gone through the bomb-bay into the cockpit in the last moments before impact. Part of that evidence was the burns on the bodies and clothing of the three crew members who had bailed out.

Later in the war B-29 42-24579, flown by the 40th BG, was named *THE EDDIE ALLEN* in honour of the test pilot. In the meanwhile, an obscure Missouri legislator, Senator Harry S Truman, chaired an investigative committee looking into the problems of the rather complex Wright R-3350 engine. Truman's panel concluded that engine-maker Wright was at fault for quality-control failings. Equally at fault, according to the committee report, was the AAF for putting too much pressure on Wright to accelerate R-3350 production.

The Eddie Allen tragedy, coupled with earlier problems, led to extensive modifications of the B-29. Sources of possible fuel leaks were hunted down and remedied, and engineers re-located fuel filler necks and installed a fire-stop bulkhead. These and other improvements went into the two surviving XB-29s and all production Superfortresses. Perhaps most significantly of all, Gen Henry H 'Hap' Arnold, AAF chief, directed Brig Gen Kenneth B Wolfe to take over all aspects of the B-29 programme, reporting personally to Arnold himself. Wolfe would soon become the first Superfortress combat commander.

On 30 August 1943, XB-29 41-002 flew from Seattle to Wichita as part of the effort to expand the production and flight-test programme. It was now the only heavily instrumented B-29 in existence – a valuable asset.

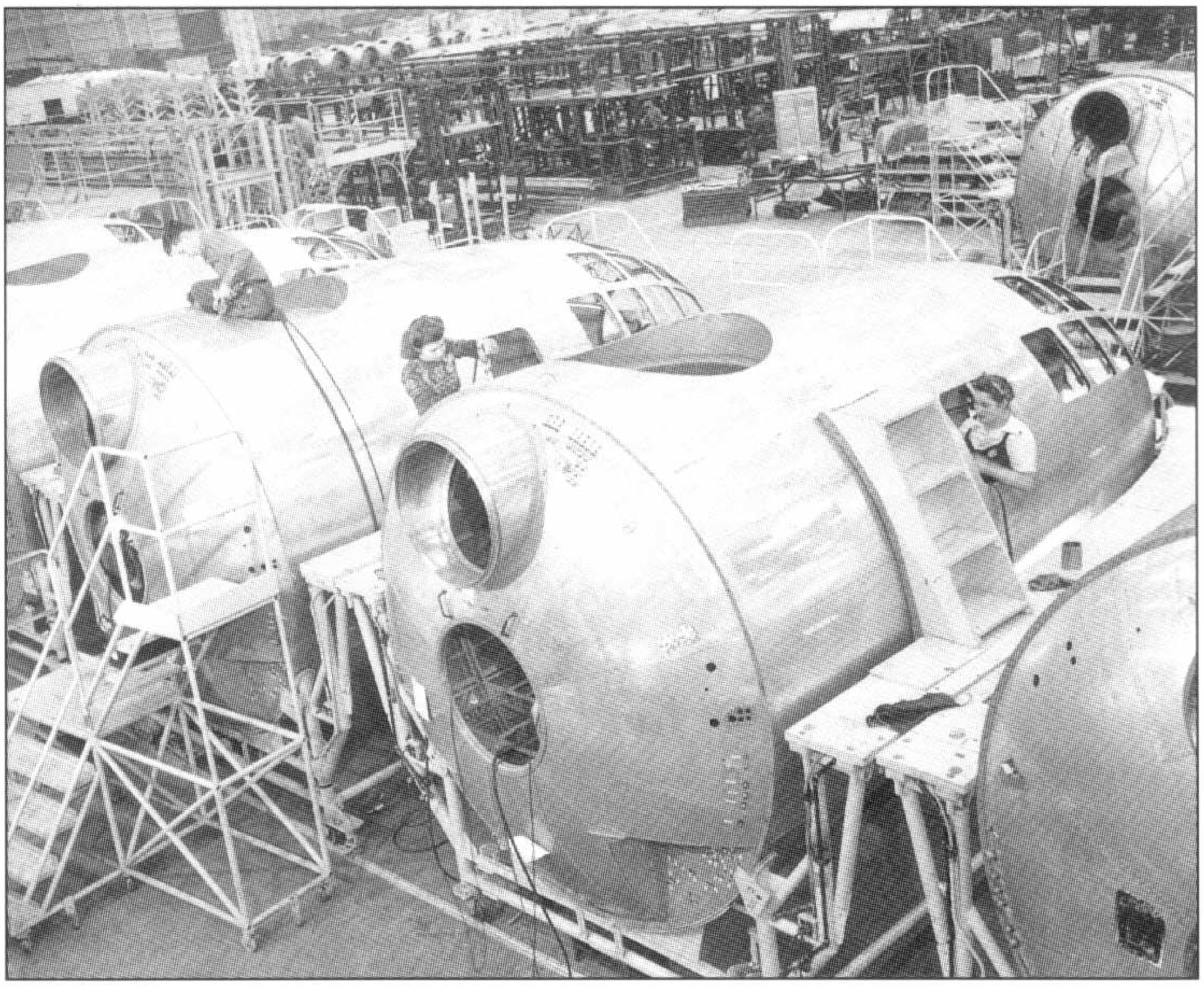
More engine problems plagued the B-29. Over time, experts solved them with minor fixes, but the third prototype (41-18335) did not fly until late June 1943, by which time it had been preceded into the air by the first of 14 YB-29 service-test aircraft (41-36954 to 36967) on 26 June.

FINALISED DESIGN

A four-engined, mid-wing 'very heavy' bomber with a crew of 11, the B-29 was powered by 2200-hp (1641-kw) Wright R-3350 Duplex Cyclone 18 twin-row turbocharged radial piston engines. These would eventually prove reliable, but at first they had troublesome tendencies.

The R-3350s almost seemed to enjoy overheating, swallowing valves and even catching fire in flight. Hoping to eke out greater horsepower from the engine, Boeing had delivered the Superfortress with a crankcase made of magnesium – a very light, very strong metal which unfortunately was also flammable. When the crankcase problem was combined with the difficulties of a fuel induction system which tended to catch fire and burn long enough to set the magnesium alight, it became a very serious situation. Air baffles to direct more air to the rear row of cylinders and propeller cuffs to force more air through the engine helped reduce the heat, but months would pass before the problem was solved.

The fuel capacity of the B-29 was 5664 Imp gal (6803 US gal), plus provision for 2131 Imp gal (2560 US gal) of fuel in a bomb-bay tank. The latter was used for the ferry flights that took the bomber to the war zone.



The B-29 Superfortress was the ultimate product of an American industrial heartland that was seemingly capable of manufacturing any weapon of war quickly and efficiently, in extraordinary numbers. In calendar year 1944 alone, American factories rolled out just a few hundred less than 100,000 aircraft. These workers at the Boeing factory in Renton, Washington, are finishing the pressurised nose sections of B-29s. The circular opening at the rear end of the forward structure is for the crew tunnel, which ran above the bomb-bay to the centre and aft sections of the aircraft. (*Boeing*)

The wing of the B-29 spanned 141 ft 3 in (43.05 m). It was an innovative design – a long and narrow high-aspect ratio wing fitted with large Fowler-type flaps. The unusual shape and configuration of the wing enabled the B-29 to fly very fast at high altitude without also having unmanageable flight characteristics during the slower speeds required for landing and take-off.

More revolutionary was the size and sophistication of the pressurised sections of the fuselage – the flight deck forward of the wing, the gunner's compartment aft of the wing and the tail gunner's station. In sharp contrast to the men who struggled to live with the discomforts of Liberators and Flying Fortresses, B-29 Superfortress crews flying at extreme altitude were almost comfortable.

Crew members travelled from nose to tail in the B-29 through a 'personnel tunnel' above the bomb-bay. The tunnel itself, first tested by busily crawling Boeing engineer Wellwood Bell in a mock-up in January 1940, was the solution to one challenge staring designers in the face. How could you pressurise an aircraft with huge bomb-bay doors that had to be opened over the target? In fact, the B-29 had two tandem bomb-bays, and was usually flown with both bays equally loaded for balance. Boeing's answer was to pressurise both ends of the fuselage, plus the linking tunnel, but not the bomb-bay itself.

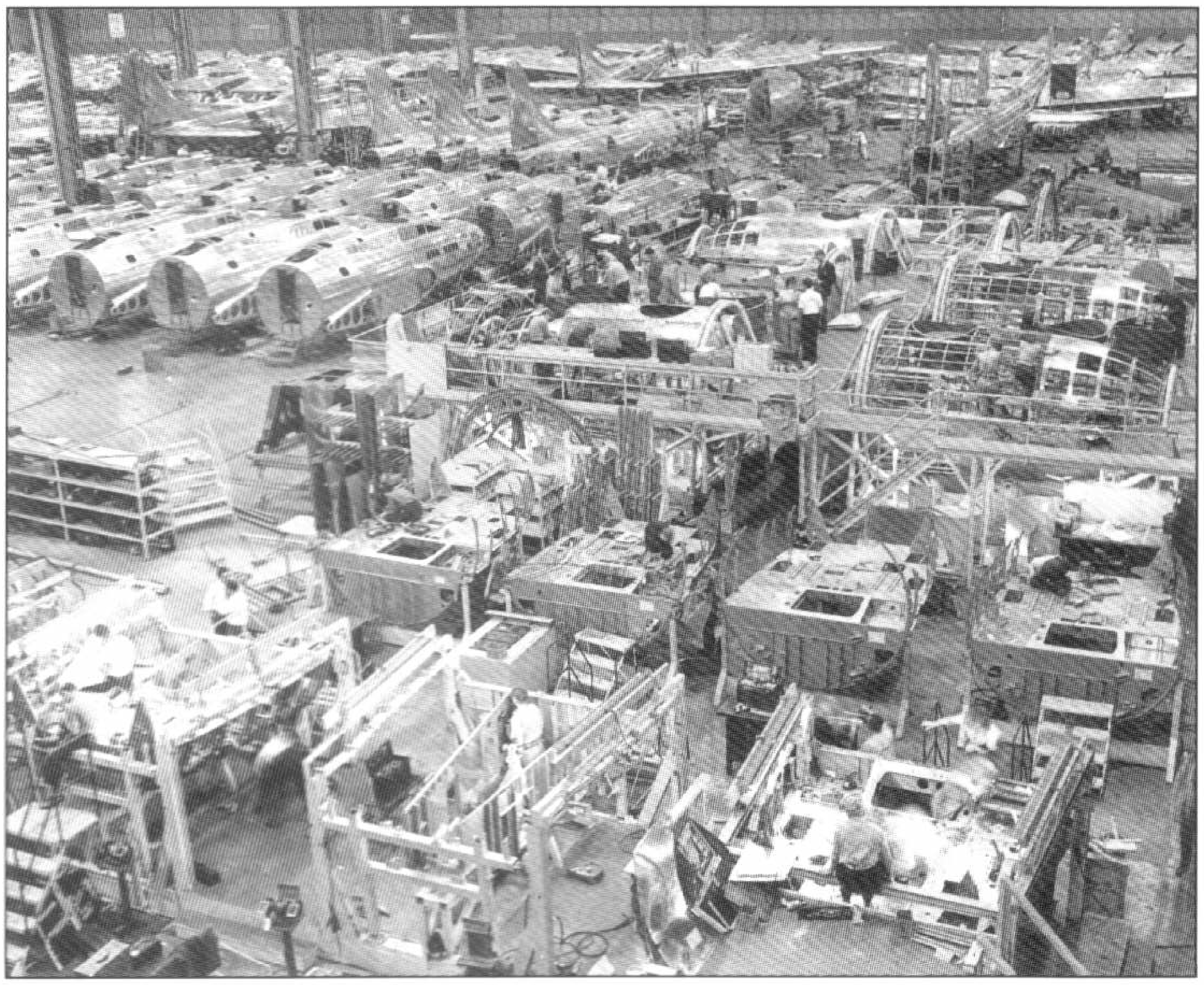
In 1943, Boeing began delivering Superfortresses to the 58th Bombardment Wing (Very Heavy), commanded by Wolfe, which had been established in anticipation of the new bomber. B-29 production was the most diverse aircraft manufacturing project undertaken in the USA during World War 2, with literally thousands of sub-contractors supplying components or assembles to the four main production plants – Boeing at Renton, Washington, and Wichita, Kansas, Bell at Atlanta, Georgia (known today as Marietta) and Martin at Omaha, Nebraska.

B-29 production totalled 1644 from Boeing's Wichita plant, with 668 built by Bell and 536 by Martin. Renton produced the B-29A variant, with slightly increased span and changes in fuel capacity and armament – production continued until May 1946, and totalled 1122 aircraft.

The designation B-29B applied to 311 aircraft built by Bell. These were reduced in weight by the removal of all defensive armament except for the tail guns, which were aimed and fired automatically by an AN/APG-15B radar fire control system. The tail armament on the B-29B was instantly recognisable by the spherical device – actually a radome – that hung beneath the guns.

The production total of nearly 4000 B-29s of all versions must be regarded as very large when viewed in light of their size and cost, and it is not surprising that they saw a wide variety of employment post-war.

REMOTE GUNS



The Boeing plant at Renton is seen during its changeover phase from the B-17 Flying Fortress to the B-29 Superfortress. Construction of the B-17 is continuing in the background, literally surrounding jigs for the B-29 in the foreground. (*Boeing*)

Although the B-29's principal technological advancement was its ability to travel far with a heavy load of bombs – typically 20,000 lb (9072 kg) – its defensive armament was also revolutionary. Sgt Van White, a gunner on the B-29 in later years, called the system 'marvellous'. It was also, initially at least, one of the causes of teething troubles.

After testing the Sperry system of retractable turrets and periscopic sights on the first three XB-29s, the AAF withdrew the company's contract and awarded it instead to General Electric (GE), who duly set about developing the bomber's armament. The GE system featured stationary, non-retractable turrets, operated by remotely situated gunners using computerised gunsights.

There were five turret positions – upper-forward, upper-aft, lower-forward, lower-aft and tail. These were fitted with two or three 0.50-cal (12.7 mm) machine guns, while the tail turret boasted one 20 mm M-2 Type B cannon, with 100 rounds, as well as two 'fifties'.

With the B-29, the gunner no longer clutched the handles of a machine gun and peered through a pip sight. Now he operated a remote device which approximated the triggering section of the gun, and used optical devices to track his foe. The three-gun arrangement in the tail made the tail gunner equivalent to a small army, or at least it would have if only the idea had been sound. According to gunner Van White:

'Installing a 20 mm cannon and two 0.50-cal guns in the same mount turned out not to make a lot of sense because the bullet trajectories didn't track, so you had no chance of a simultaneous hit on an enemy fighter.'

Because of this glitch, manufacturers deleted the 20-mm cannon from the tail position beginning with Boeing-Wichita production block 55, Bell-Atlanta block 25 and Martin-Omaha block 25.

In Europe, heavy armament combined with the strength in numbers that came from formation flying made life difficult for the fighter pilot who wanted to attack and shoot down a four-engined bomber.

Over Japan, it was different. Formation flying proved difficult, especially on high-altitude raids where crews encountered powerful winds. B-29s flew many missions as single ships within a larger attack force, but not as part of a formation. When the war shifted to lower altitude, and later to night combat, armament became less useful. By the end of hostilities, entire bomb wings were going into combat with no guns at all except in the tail position.

CREW COMPOSITION

From the beginning, the B-29 Superfortress was seen as a big bomber with a big crew, the largest of any American bomber at the time. There were minor variations from one unit to another, and from one era to the next, but a B-29 usually went into battle with 11 men aboard.

A typical crew consisted of a pilot, co-pilot, bombardier, navigator, flight engineer, radio operator, radar operator, central fire control gunner, left side gunner, right side gunner and tail gunner. The first six crewmen were housed in the forward pressurised cabin, The next four in the rear pressurised cabin and the tail gunner in a separate pressurised compartment in the tail. Later in the war, crew size was occasionally increased to 13 with the addition of two radar/radio operators to man the AN/APQ-7 Eagle radar and electronic countermeasures equipment.

Further insights into the crew appear in Chapter Three. A slightly more detailed crew breakdown follows:

Pilot – in the left seat on the flight deck, the aircraft commander, also called the command pilot or simply the pilot (always an officer), was in charge of all operations of the aircraft, and in charge of the crew. Most early Superfortress commanders were experienced veterans who had flown other types such as the B-17 Flying Fortress and B-24 Liberator.

Co-pilot – occupying the right seat on the flight deck was the second pilot, usually called the co-pilot but sometimes simply the pilot (he was also always an officer). He was expected to gain experience, and many did so rapidly. The co-pilot usually handled much of the routine flying at altitude, and performed take-offs and landings when circumstances permitted. The B-29 never acquired a reputation for being a particularly forgiving aircraft, and many co-pilots completed a full tour of duty without ever moving over to the left seat.

Navigator – located up front with the flight crew, behind and to the left of the pilots, the navigator (also an officer) was charged with getting the aircraft to and from its destination. The rated navigator's job did not exist until the US entered the war (until then, navigation was done by rated pilots, one of the most skilled being a junior officer named Curtis LeMay). On formation missions, the lead navigator could be the most important crewman in a B-29, often having to cope with visual and celestial challenges greater than those encountered by bomber crews in Europe.

Bombardier – sat in the 'catbird's' seat, so to speak, in the rounded nose of the B-29. The bombardier, with his vaunted Norden bombsight, was responsible for hitting the target. He also had the secondary duty of operating the upper turret of

The distinctive shape of the B-29 Superfortress reveals itself in this portrait taken on an early flight in the United States. The sheer size, the awesome appearance and the spanking new, silvery look all conceal the fact that early B-29s were blighted by serious technical troubles. Emergency measures had to be taken to find 'quick fixes' that allowed the Superfortress to be pressed into action. (*Boeing*)

two/three 0.50-cal. (12.7-mm) remote-controlled guns and the lower turret of two. His command of the turrets could be overridden by the central fire control operator.

Flight engineer – located immediately behind the pilots, and facing aft, the flight engineer (an officer on most B-29 crews in World War 2, who had often trained as a pilot) started the engines, checked them out, helped the pilot to set power for take-off and spent the mission troubleshooting engine temperatures and performance. Just before the take-off roll, flight engineer M/Sgt Jesse Richey remembers, 'It was your job to tell the pilot, "All instruments in green!" and it was pretty damned important that they be that way'.

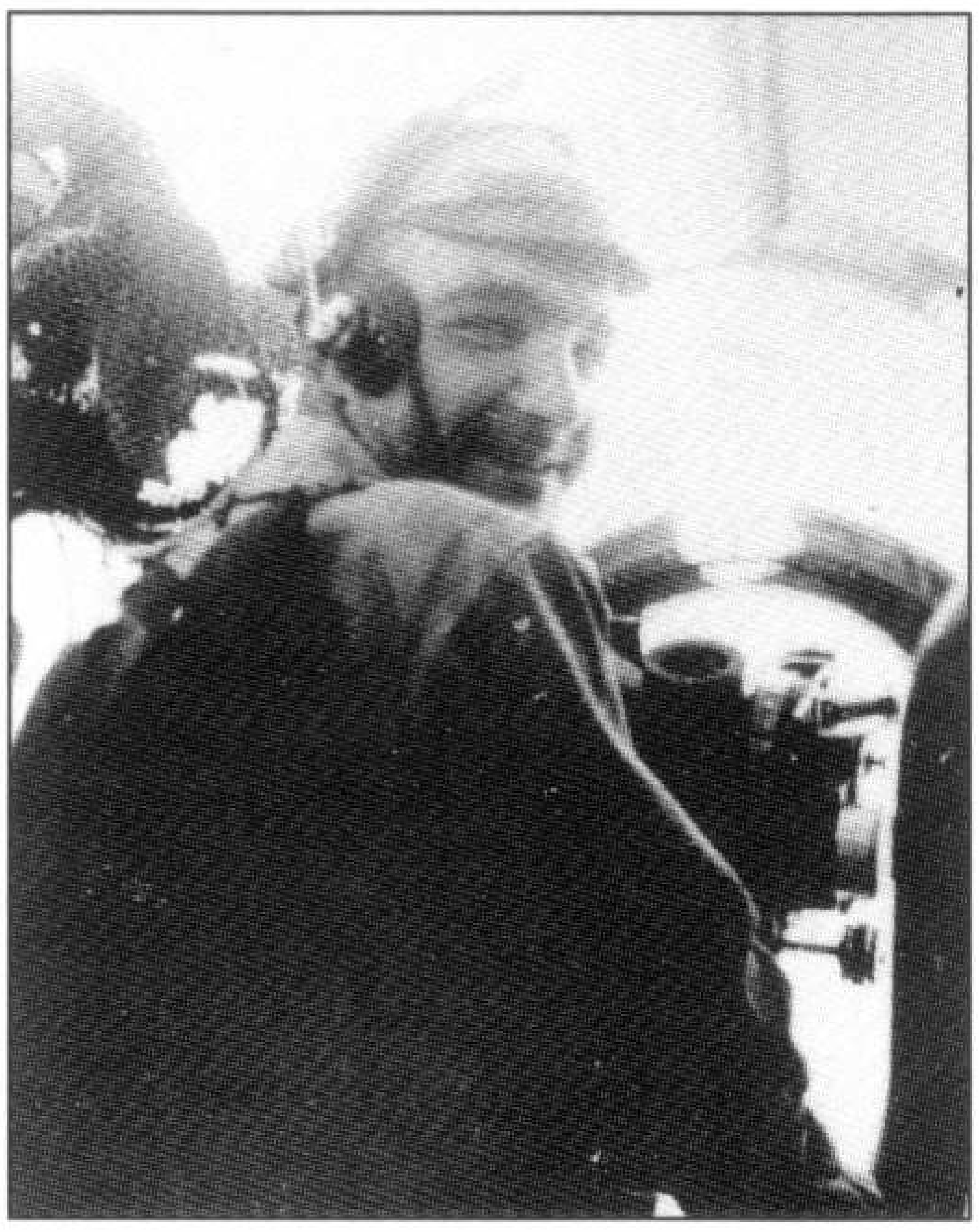
The post of flight engineer was gradually opened up to suitably qualified enlisted men as World War 2 progressed, and by mid-1945 many were sergeants. But as radio operator Sgt Jim B Smith remembered, 'Every one of those flight engineers should have been a colonel. They were the heart of the aircraft'. Yet another flight engineer, Sgt Earl Leonard, stated, 'They needed us most during the 20 minutes from the IP (initial point) to the target. I sat there, sitting backwards, looking at my instruments and controls ready to take any possible emergency action, but all I remember was fire and anti-aircraft flashes'.

Radar operator – the radar operator was initially one of the crew members seated in the rear fuselage area behind the crew tunnel. Later, and particularly on 315th BW aircraft that were stripped of armament towards war's end, the radar operator was an officer seated forward of the tunnel near the flight deck on the left side of the aircraft. The radioman was responsible for the AN/APQ-13 radar found on most wartime B-29s, and the AN/APQ-7 Eagle radar that exclusively equipped the Superfortresses of the 315th BW – these arrived in the combat zone near the end of the fighting. The radar operator took over the job of dropping the bombs when the drop was made through the weather.

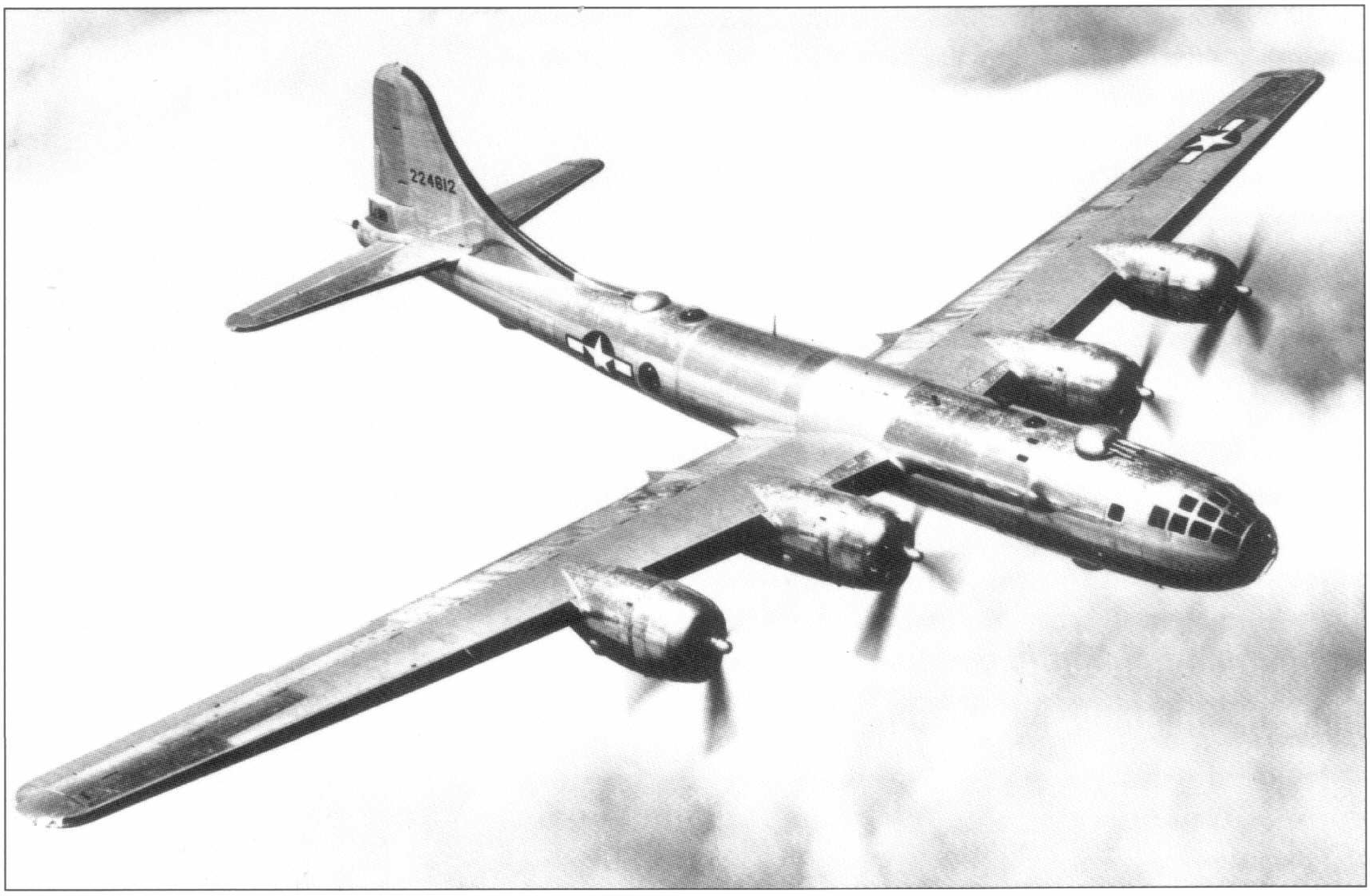
Radio operator – also located on the right side of the flight deck behind the pilots, the radio operator was always an enlisted man. He handled the communications gear and kept the VHF command radio (used by the aircraft commander) and Collins HF 'Mixmaster' voice/Morse radio (used for longer-range communication) in working condition. The HF unit was attached to a trailing antenna that extended behind the aircraft. In practice, little radio communication took place during a real-world bombing mission – any actual talking was done by the pilots. The radio operator also handled Morse communications, which were important to every mission.

Central fire controller (CFC), or top gunner – this enlisted crew member was first among equals as one of five men assigned to the Superfortress's ambitious, remote-controlled General Electric defensive gun system.

Right gunner – this enlisted gunner operated the guns in the right rear fuselage.



An unidentified bombardier looks up from his Norden bombsight in the nose of a B-29 whilst en route to Japan. (*via Norman Taylor*)



The manufacturer and the Army Air Forces did their best to make the B-29 look like a true Superfortress with the release of photographs such as this one (of B-29A 42-24612), showing a factory-fresh aircraft gleaming in the sunshine whilst on a pre-delivery check flight. These portraits made the B-29 look great, but they hid the harsh truth that engine fires, maintenance problems and technical glitches were delaying the entry of the new type into service. By the end of 1943, only a handful of B-29s were operational, and actual combat was still many months away. (*Boeing/AAF*)

Left gunner – like his counterpart protecting the B-29's right side, the left gunner was an enlisted man operating the guns in the left rear fuselage.

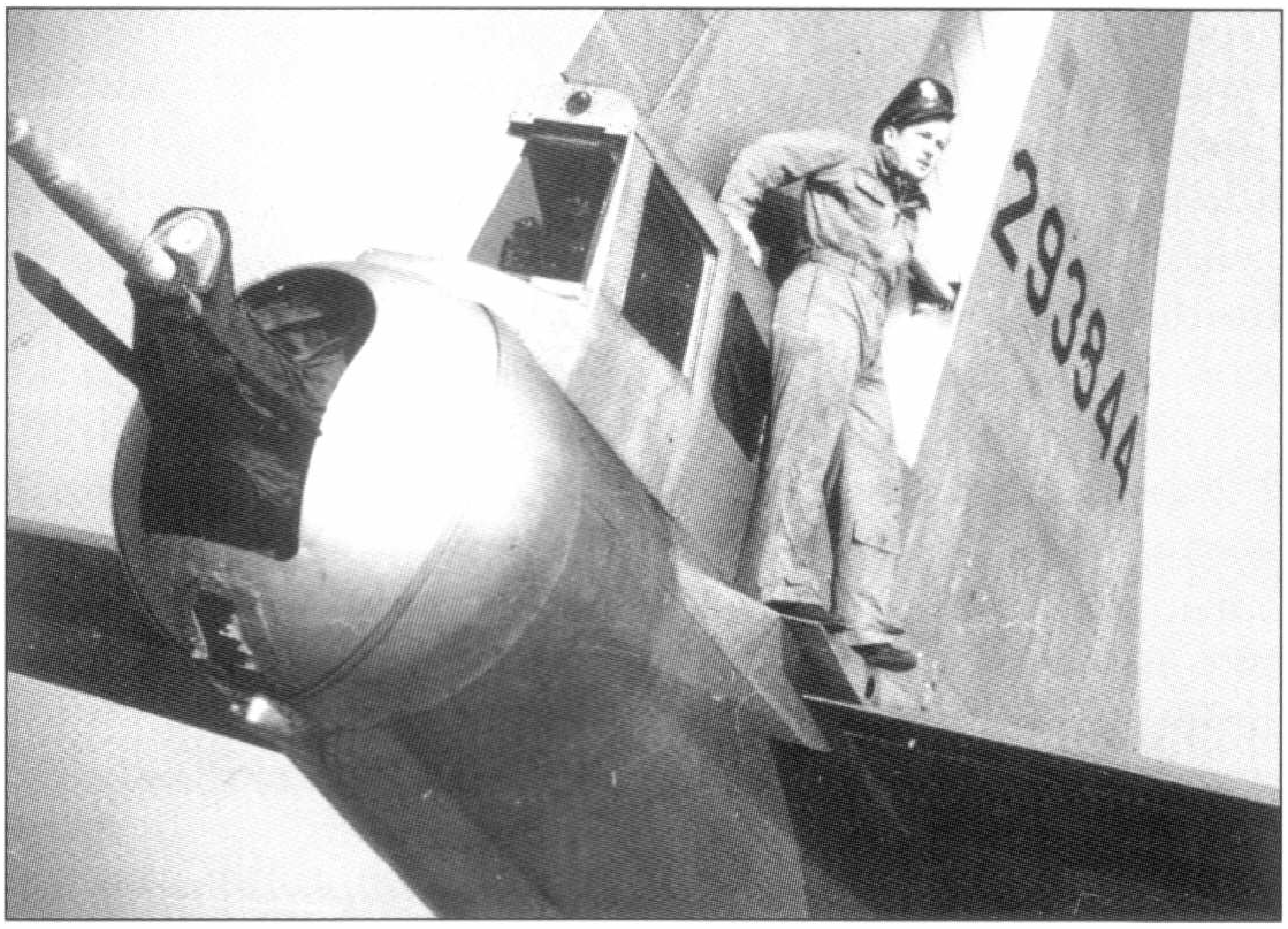
Tail gunner – the tail gunner faced to the rear and had the lonely job of defending the bomber from stern attacks with the rearward-mounted guns. Heated accounts from battle tell of gunners blazing away at Zero, 'Tony' and 'Nick' fighters, but we often forget that gunners put in long hours before and after a mission. Andy Doty, who flew as a B-29 tail gunner from Guam, described his mission preparations this way:

'The tail gunner removes long belts of 0.50-cal ammunition from wooden boxes and stretches them out on the ground. He makes sure that each round is clean and properly aligned. Then he hauls his ammunition box up the rear entrance ladder and into the aircraft. He moves toward the tail with his burden, hunches down as the space narrows, then crawls to the metal ammunition containers located at the sides of the narrow space, just forward of his tail compartment. It is hot work inside the bomber, layering the belts into the rectangular containers.

'He feeds the end of each belt into the tracks of rollers that lead under his pressurised tail compartment and into the separate turret bearing his twin machine guns. That done, he crawls through a round door into the compartment itself and rises to his feet. The compartment is six feet high and four feet square. Behind him is a seat that can be slid down a rack and unfolded. His one-man life raft pack forms the cushion of the seat. There are windows at each side and a thick slab of bullet-proof Plexiglas in the front.

'His General Electric gunsight – a pivoting instrument that remotely controls his gun turret – stands on a shelf in front of him. After checking that his high-altitude bail-out oxygen bottle, flak suit, flak vest and life raft are all in place, the gunner climbs down from the bomber and makes his way to the tail. There, he mounts a ladder and uses a screwdriver to remove the covers on his turret, revealing the two 0.50-cal guns. He opens their lids and slides the belts of ammunition along their tracks. He fits the first round into each gun, then closes the lids.

'The guns are loaded "hot". He actuates the weapon with his screwdriver, slamming the first round into the firing chamber. It is a ticklish moment, for rounds have been known to fire prematurely in a gunner's face. With the weapons ready to fire, he replaces the turret covers, shifts his ladder, and reaches up to polish the windows of his compartment until they gleam.'



Preparing to ship to the Pacific, pilot/engineer 1Lt George Wale poses in his overalls and service hat on the horizontal stabiliser of B-29 42-93844 *ANNA BELLE* of the 40th BS/6th BG during a training deployment to Puerto Rico in October 1944. This view illustrates the spacious tail gunner's position, as well as the remote-controlled 20 mm cannon, straddled by two 0.50-cal (12.7 mm) machine guns. (*George Wale*)

COMBAT ORGANISATION

From the earliest days of B-29 development, the top brass in Washington argued over how best to manage the Superfortress, and the bombing campaign that would ultimately be mounted against the Japanese home islands. From the beginning, there was discussion about commanding the Superfortress effort from the northern Virginia suburbs of Washington, where, in early 1943, the AAF's top general, Henry H 'Hap' Arnold, moved into the newly constructed Pentagon building.

The world's largest structure, the Pentagon boasted a bizarre, five-sided shape so that any office could lie within walking distance of any other. When it opened for business, the Pentagon also boasted twice the number of bathrooms it needed – a gesture to racial segregation in Virginia that did not exist across the river in Washington, DC.

Little fanfare accompanied the opening of the Pentagon, but there was general agreement that the new building was an engineering marvel. No one was quite sure, however, what had happened to its builder, the US Army's arrogant, short-fused Lt Gen Leslie Groves, who had now moved on.

He had become the head of the Manhattan Engineer District. The Army had devised both names to conceal the true purpose of Groves' s programme. No longer a familiar sight in Washington, he was off in the high desert of New Mexico building a new town (and a secret laboratory) with a cadre of civilian scientists. Groves was in an obscure backwater named Los Alamos, which was so remote that one local resident called it a 'one-horse town'. The name was unknown to Americans.

Equally unknown to the US public was the name of another city where Groves' latest wartime construction project would bear fruit more than two years in the future. That name was Hiroshima.

The first production B-29 was completed at the new Boeing plant in Wichita in July 1943. By the end of the following month, 14

Superfortresses had rolled off the assembly lines. The new bomber had moved from conception to production in an unprecedented amount of time, but had suffered many early problems as a result. And by the following January, only 97 B-29s had been built, and of those just 16 were flyable. The other aircraft required some 50 modifications each to be combat ready. Eventually, the productive capacity of Boeing, and a great many sub-contractors, came on line and production began to pick up.

While Arnold and others in Washington debated how to organise the B-29 force, the 58th Bombardment Operational Training Wing (Heavy) stood up at Smoky Hill Army Air Field in Salina, Kansas, on 1 May 1943. It quickly underwent a name change, becoming – as noted earlier – the 58th Bombardment Wing (Very Heavy) on 1 July. The wing had five groups, the 40th, 444th, 462nd, 468th and 472nd. The first four would eventually go to war, while the 472nd BG would remain a training group until it disbanded in April 1944.

In retrospect, the formation of the 58th BW seems premature. Deliveries of B-29s from the factories were occurring very slowly, and technical problems with the Superfortress continued to plague the AAF.

Brig Gen Kenneth Wolfe, the first commander of the 58th BW, was reassigned to form a second Superfortress wing, the 73rd, in November 1943, and then to take command of XX Bomber Command, which would bring the two wings up to combat status.

At the Pentagon, where plenty of thinking was going on, the original plan was that three bomber commands would surround Japan – XX in India and China, XXI in the Pacific islands wrested from Japanese hands, and XXII in the Philippines. It did not turn out that way. In fact, the plan ran up against AAF boss Hap Arnold's biggest challenge. The United States Army was always ready to fight boldly against the nation's enemies, but its first priority was always to defeat its adversary at home, namely the United States Navy.

Army chief of staff Gen George C Marshall, along with Arnold and others, did not want their new superbomber coming under the command of a Pacific theatre boss who wore a Navy uniform. Adm Ernest J King, who was both chief of naval operations and commander-in-chief of the US fleet, saw the final battle against Japan being a naval one, and wanted the B-29 force subordinate to Pacific naval boss Adm Chester Nimitz. In the internecine warfare that took place within the Washington bureaucracy, King lost.

The B-29 force would go to war commanded directly from Washington. XX and XXI Bomber Commands would become the Twentieth Air Force, commanded – nominally at least – by Arnold. Two of the key figures in fielding the B-29 force, Brig Gens Kenneth Wolfe and Haywood Hansell, would be virtually unknown to the public by VJ-Day, yet almost everyone would recognise the name of Hansell's replacement, Maj Gen Curtis E LeMay.

At the end of 1943, no one knew most of this yet. Indeed, the men employed in the B-29 programme were too preoccupied with another concern. Their new bomber was suffering too many technical glitches. In fact, mechanical problems were so prevalent in early stateside operations that some wondered whether Boeing's potentially awesome B-29 Superfortress would ever get to wage war at all.

From the beginning, AAF chief Gen Henry A 'Hap' Arnold (right) wanted to keep the strategic bombing effort against Japan under the control of the top brass in Washington. Arnold was largely responsible for the eventual creation of the Twentieth Air Force, which reported directly to the Joint Chiefs of Staff. Here, Arnold is talking with Lt Gen James Doolittle, who had been tasked with moving the Eighth Air Force from England to the Pacific after VE-Day. The shift of theatres for the famous 'Mighty Eighth' came too late to have much of an impact on the war with Japan. (*AAF*)

1944

It was spring in Washington. Along the Tidal Basin, cherry blossoms bloomed. They had been presented as a gift to the nation from Japan decades earlier, but the annual cherry blossom festival was on hold for the duration. In like manner, people in Japan had temporarily suspended their most popular sport, baseball.

Gen Henry H 'Hap' Arnold was paying no attention to the flowers Japan had given America, or the pastime America had given Japan. On 4 April 1944, the commander of the AAF inked an agreement that created the Twentieth Air Force. For the first time a numbered air force would be commanded from Washington. It was also the first time that a numbered air force had been created to use a single aircraft, the cantankerous and completely unproven B-29 Superfortress.

Arnold's AAF did not yet know whether the B-29 could fight effectively, let alone prevail over Japan, but for the moment at least, the Army Air Force – in its quest for dominance in the Pacific – had managed to vanquish the Navy. The two services regularly fought 'turf wars', the generals and admirals being so busy vying for political favour that they were sometimes accused of forgetting who the real enemy was.

A month earlier, Arnold had visited Salina Army Air Field in Kansas to find the newly created 58th BW in disarray. Flaws in the B-29 design had been fixed, but logistical logjams abounded. Arnold had expected to send off 150 new bombers to bases in India on 10 March, but instead he found himself spouting orders and launching a major readiness effort that came to be known as the 'Battle of Kansas'. With Arnold cracking the whip, AAF officers found logistics shortcuts that saw most of the bombers ready to deploy within a month.

1Lt Michael P Curphey, who felt some of Arnold's fury over delays, remembers the situation well:

'The B-29 was not quite ready for prime time when it left the Boeing assembly line. Boeing knew it, and the AAF knew it. That's what happens when you order a couple of thousand aircraft before the first prototype has even flown, never mind that they were building the most sophisticated aircraft ever designed up to that time.

'"Hap" Arnold knew that the early aircraft rolling off the assembly lines were not ready for combat, and so several modification centres were set up to repair the glitches – over-heating engines, frozen guns, bad window seals, flap and rudder problems and all kinds of electronic failures. There was a major problem with vibration in the "cannon plugs" – a type of electrical connector with multiple pins inside. We had to remove and re-solder 586,000 contacts, which required 40,000 man hours to complete! If you've ever had to take apart and repair a solder-type cannon plug, you know what a chore that was.

'Another problem was that Boeing's sub-contractors had not yet geared up to wartime production pace, so parts that Boeing needed for modifications were not arriving in time to install them on the production

During the early weeks of the B-29 campaign against Japan, the Twentieth Air Force was losing bombers – mostly to non-combat causes – faster than Boeing, Martin and Bell could manufacture them. Some critics blamed the losses on the decision to use tactics that worked in Europe, where crews had never encountered the furious jetstream winds that raged at high altitude over Japan. There were also plenty of mishaps like the belly landing which damaged this Superfortress of the 468th BG/58th BW. It would take the combined lifting capacity of both Brockway C666 6-ton revolving cranes to manoeuvre the crestfallen B-29 onto the tripod jacks positioned in front of both wings. Once on the jacks, the recovery crew would manually extend the landing gear, then get to work stripping away the damaged underfuselage panels. (*via David R McLaren*)

line. Therefore, when received, they were sent on to the modification centres to be installed there. The major mod centre was in Kansas, where "The Battle of Kansas" took place.'

INDIA BOUND

The first flight of B-29s left Kansas for India on 26 March 1944. Many were attired in the olive-drab paint scheme that the AAF had now decided to retire, and one or two would retain these colours until war's end.

The bombers made the journey eastward via Maine, Morocco and Egypt. Their destination was Calcutta in India, where airfields for the 58th BW were being readied. During the ferry effort, which continued into early May, several B-29s were lost in mishaps, and at least a dozen men lost their lives.

With some difficulty, the 58th BW prepared to fight, its four groups scattered in the Calcutta region at Chakulia (40th BG), Charas (444th BG), Piardoba (462nd BG 'Hellbirds') and Kharagpur (468th BG and wing and command headquarters). Charas turned out to be a boiling hellhole, with a main runway that ran uphill, and the 444th BG soon re-located at Dudhkundi. Brig Gen Kenneth Wolfe established XX Bomber Command headquarters at the recently completed airfield near the town of Kharagpur, west of Calcutta.

One of the AAF's most experienced procurement and engineering officers, Wolfe had been an important force in the flight testing, production and crew training for the B-29. The record of his performance as a combat commander is less clear. There was a great deal of discussion about how best to use the new Superfortress bomber and its inexperienced crews, and Wolfe may have felt he was being micro-managed from Washington.

One of Arnold's Washington-based ideas men was Col Emmett 'Rosy' O'Donnell, who had proposed that Wolfe's B-29s be stripped of armament and used for night, radar-bombing missions. Arnold did not like this idea, and neither apparently did Wolfe.

CHINA CHALLENGE

The bases in India were not within operational range of any inviting Japanese targets, and the plan to fly B-29 missions out of China quickly proved more of a challenge than had been anticipated. AAF transports were bringing in supplies and fuel for the units already in China by flying 'the Hump', the Himalayan mountain range which boasted the tallest peaks in the world (and finicky weather to boot), but the Superfortress groups would have to bring their own supplies into China. Bomber crews, having trained to engage the enemy, and having won the 'Battle of Kansas' thanks to hard work and dedication, were in no mood to be cargo carriers. They had no choice, however.

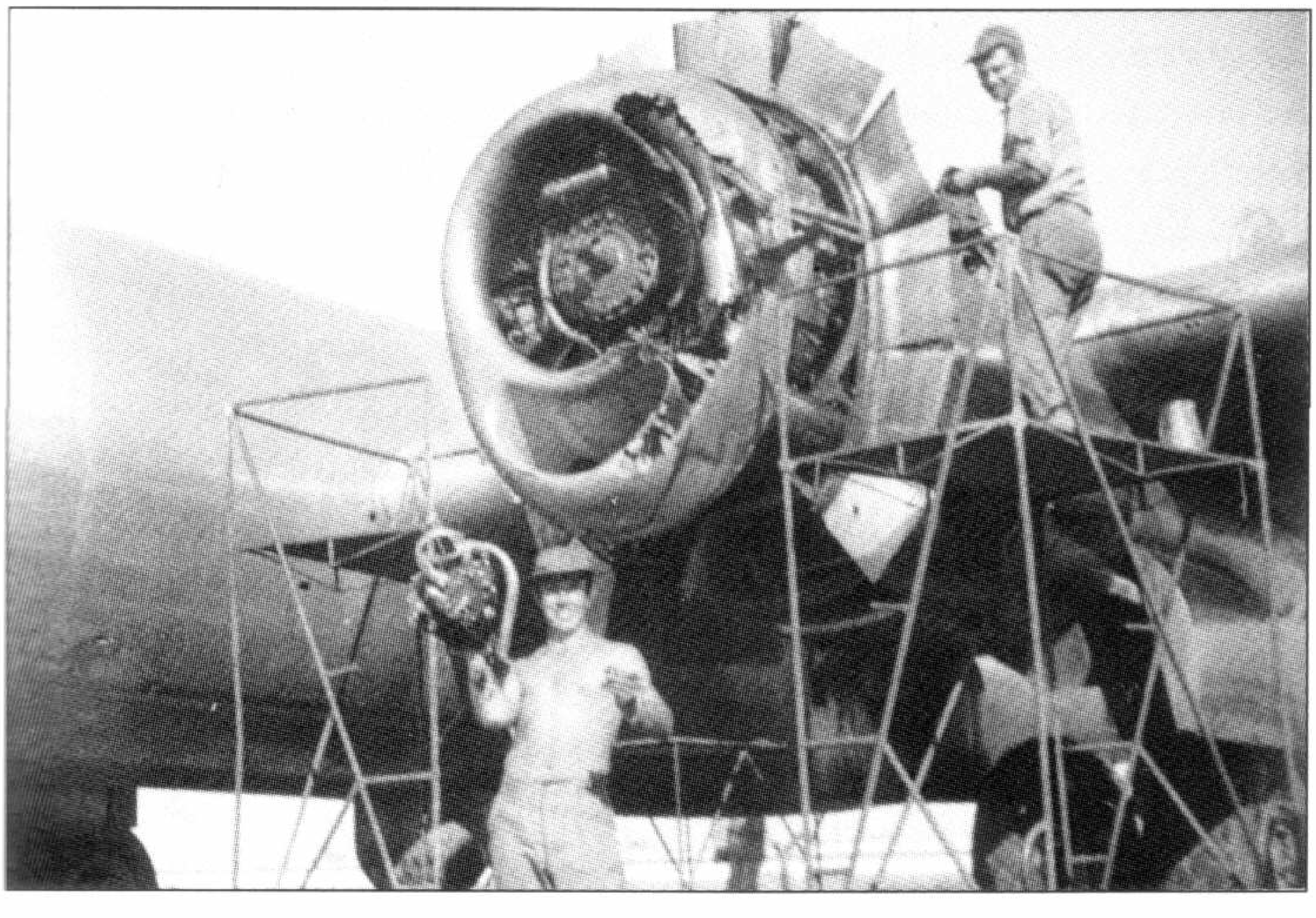
Beginning on 24 April 1944, Superfortresses began hauling supplies into China. Two days later, a B-29 wearing no distinctive markings became the first Superfortress to engage Japanese fighters. Wichita-built B-29-BW 42-6331 was hauling supplies over 'the Hump', en route to Hsinching, when it tangled with a Ki-43 'Oscar' fighter flown by Capt Hideo Miyabe (see *Osprey Aircraft of the Aces 13 - Japanese Army Air Force Aces 1937-45* for further details), commander of the Japanese Army Air Force's 64th Sentai. Tail gunner Sgt Harold Lanahan was credited with an aerial victory, as was Capt Miyabe! In reality both aircraft made it home, the B-29 with eight bullet holes in it (see *Osprey Aviation Elite 5 - B-29 Hunters of the JAAF* for further details).

By the end of May 1944, Superfortresses had completed 245 supply flights into China, assisted by AAF transports. Mechanics had by then stripped 20 B-29s of their armament and transformed them into fuel-carrying tankers for this logistical effort. The supply shuttle persisted into June and July, the Superfortresses bolstered by cargo-hauling C-46 Commandos and C-109 Liberators.

But June was a month for other things. Finally, a chance for combat presented itself. As noted at the beginning of Chapter One, the B-29 had experienced its baptism of fire on 5 June 1944 when 'Superforts' attacked Makasan, near Bangkok. Wolfe had always seen this mission as a practice run for his fledgling bomber crews and, back in Washington, Arnold saw it that way too.

It was a chequered beginning. B-29-BW 42-6318 of the 40th BG lost an engine on take-off, faltered aloft then crashed in a fiery blast, leaving just one survivor among its ten-man crew. Frustration grew when 17 aircraft of the 98-aeroplane strike force had to abort with mechanical problems, while the remaining bombers flew toward what was supposed to be a visual target, only to encounter gathering undercast. These two hang-ups – mechanical woes and fickle weather – would plague the B-29 force for the remainder of the war.

Although the Superfortresses released both incendiary and GP (general purpose) bombs, it is not clear how much damage they inflicted on the Makasan railway depot. A further five bombers failed to return to their bases in India. One of these refused to sink after ditching in the Bay of Bengal. While all but two of the crew were



This engine was damaged when a propeller ran away and finally burned off, parting company with the aircraft and striking the cowling as it flew away. Propeller burn-offs were not uncommon, and could sometimes result in damage to the fuselage, injuring or killing crew members. All B-29 maintenance work was performed outdoors, using scaffolding designed to fit around the exterior of the big bomber. *(Chester Marshall)*

A B-29 departs India en route to a staging base in China, from where the 15 June 1944 mission against Japan's Yawata steel works would be mounted – the first strike by Superfortresses against the Empire's homeland. By this early juncture, B-29s had already hit a target in South-east Asia, but were yet to start the more serious business of attacking Japan itself. Distinctive markings are still to be applied to this aircraft, or have they been deleted by the wartime censor? (*Army Air Forces*)

picked up by rescue boats (a part of the 'navy' that belonged to the AAF, these boats being manned by AAF crews), the B-29 floated around, behaving much like a boat itself, until it came to a halt near the shore, still on the water's surface.

As it had intended to do from the beginning, Twentieth Air Force prepared to move its aircraft into China, and to attack Japan from there. In mid-June about 80 B-29s made the crossing into China, and crews immediately started preparing for an assault on the Yawata steel works, situated on the westernmost Japanese island of Kyushu, on the night of 15–16 June.

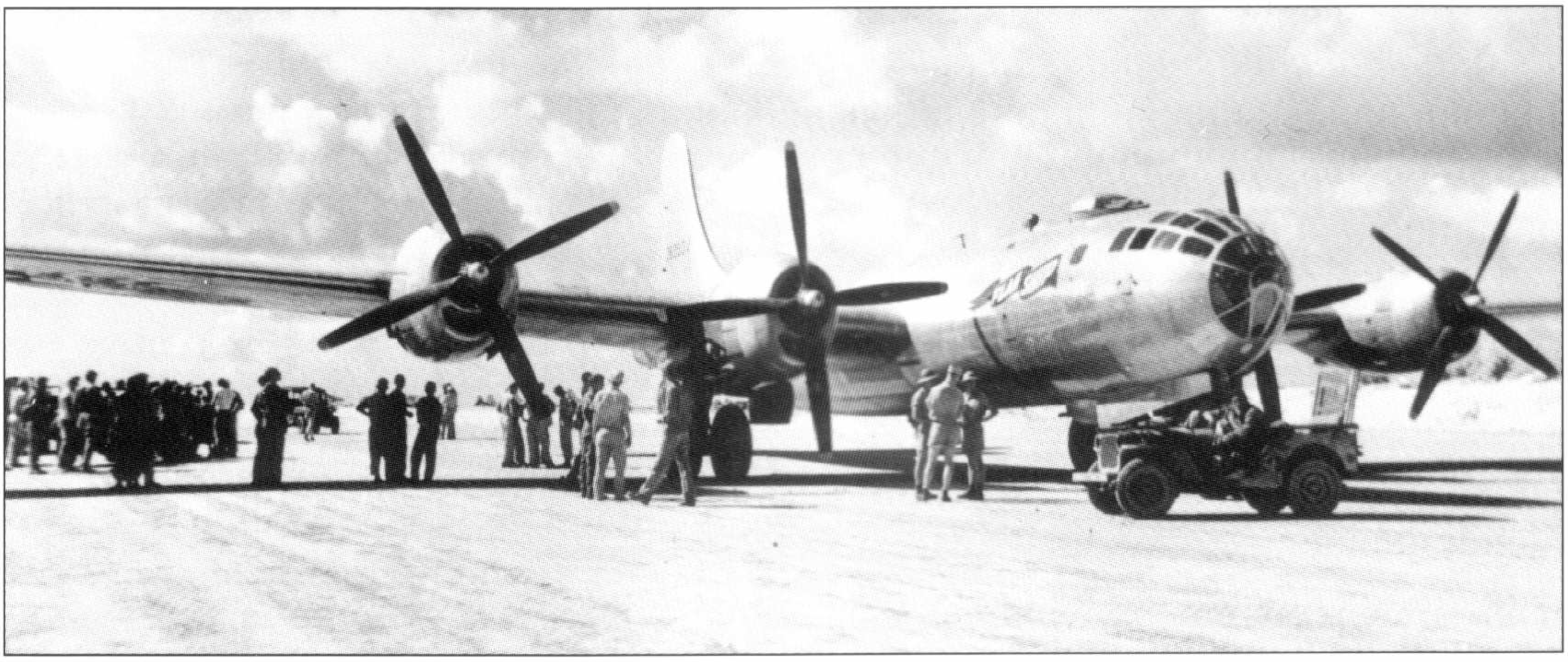
Again, mechanical and weather issues arose, and losses were sustained – no fewer than seven bombers, mostly from the 468th BG. One loss occurred when a Superfortress flew into debris left by another after it had been attacked by a Ki-45 flown by WO Sadamitsu Kimura of the 4th Sentai. The second B-29 burst into flames and crashed.

Also lost on the mission was B-29-BW 42-6293 of the 444th BG, which encountered mechanical problems but landed relatively intact at a Chinese airfield. The following day, the crew was labouring to make the Superfortress airworthy when Japanese aircraft arrived abruptly overhead and destroyed the bomber on the ground.

On the night of 7–8 July, 18 Superfortresses launched from a base near Chengtu to strike the naval base at Sasebo, also on Kyushu. Later, it was learned that their bombs had missed the port facility by as much as 12 miles due to mechanical problems with the radar bombing system. This poor result followed hot on the heels of the Yawata debacle, where just one bomb actually hit its intended target.

On the return flight seven Ki-44 'Tojo' fighters tangled with the bomber formation, with inconclusive results.

So far, it seemed that the massive bombing strategy which had been the keystone of US air power doctrine was rapidly going nowhere on all four engines. 'You would not be able to blame our generals for being deeply discouraged', says Paul Savko, a historian who served as a B-29 gunner in a later era. 'They had built this magnificent flying machine. With difficulty, and a nudge from Gen Arnold, they had overcome the initial logistics problems. But they could not yet see any tangible result, except that some of their buddies were dying.'



Not long after the Marines began their assault on the island of Tinian on 24 July 1944, B-29-BA 42-63504 *FLAG SHIP* became the first Superfortress to land on the island outpost in the Marianas, which was soon to become the largest airfield in the world. *FLAG SHIP* had yet to have any distinctive unit markings applied to its tail when this photograph was taken. (*AAF via Norman Taylor*)

RUSSIAN LANDING

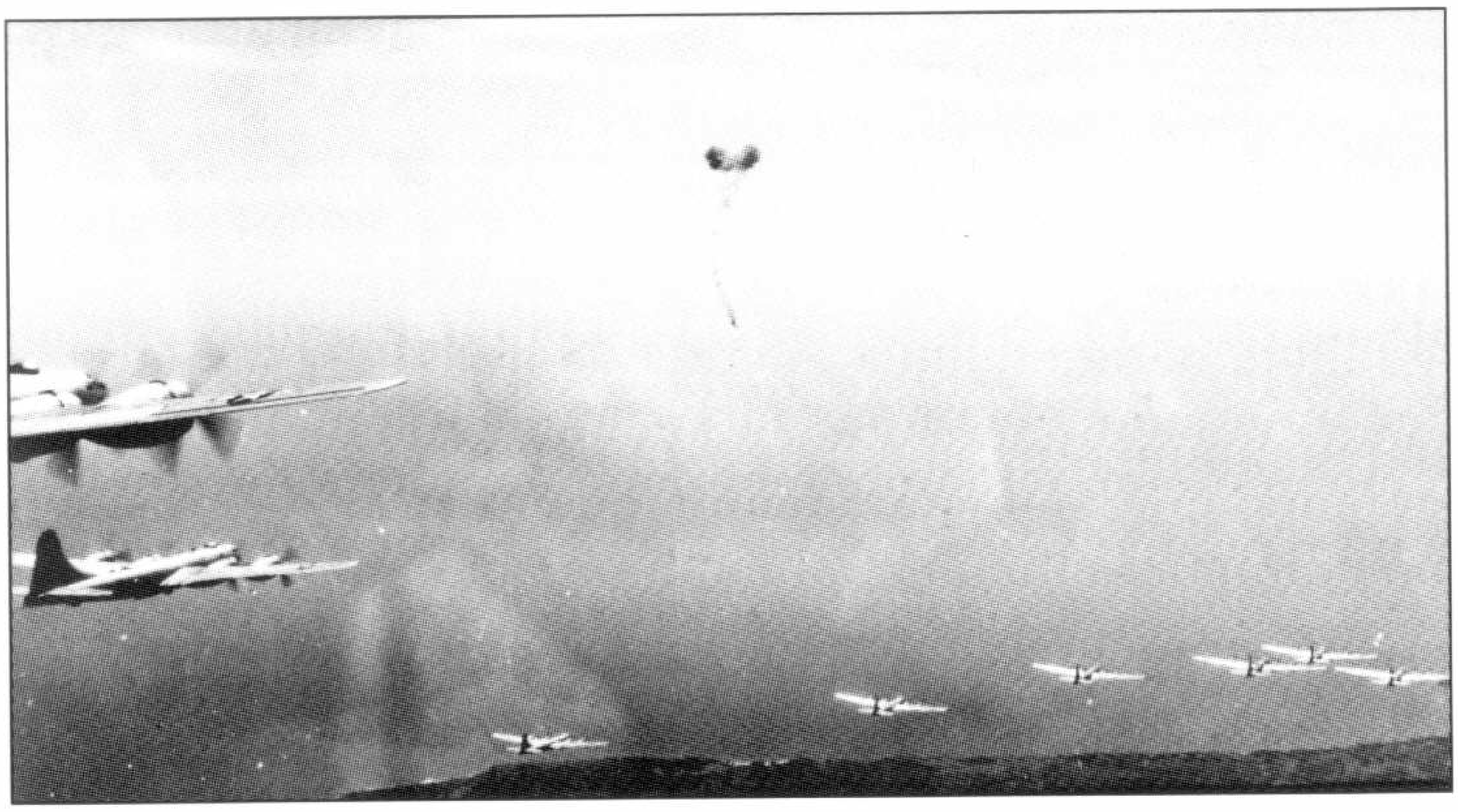
While the aerial campaign was still being mounted from China and India, events in the Pacific were moving rapidly. On 24 July US Marines began their assault on the island of Tinian. One of them, Pfc Victor Parissis, looked at the smoke-strewn island, saw 'what I would call a desolate place of sand, slag and rock', and wondered what conceivable benefit, if any, Tinian could offer the Allied war effort.

Meanwhile, rapidly gaining experience for the assault on Tokyo, B-29 crews struck the Showa steel works in Manchuria on 29 July, and Nagasaki on the night of 10–11 August. The latter date had also seen a Superfortresses sortie from Ceylon to attack the Pladjoe oil refinery at Palembang, in Sumatra. On the Nagasaki raid, T/Sgt Harold C Edwards was credited with shooting down a Japanese fighter with his bomber's tail-mounted 20 mm cannon. It was the first kill for the Twentieth Air Force.

One of the participants in the Manchuria mission on 29 July made an emergency landing at Vladivostok, where it became the first of three Superfortresses to be interned by Soviet authorities. Capt Howard Jarrell, the pilot of B-29-5-BW 42-6256 *RAMP TRAMP*, apparently expected the Russians to greet him and his crew with open arms. After all, the US and the USSR were Allies in the struggle against Hitler's Germany, and there was talk (premature, as it turned out) of the Soviets entering the fight against Japan.

In reality, Jarrell and other Superfortress crewmen who landed on Soviet soil – like the 'Doolittle Raiders' who preceded them in April 1942 – were treated as anything but brothers in a common cause. The men were interned. Some felt they were received more as enemies than as friends.

Their bomber was another matter. Feasting his gaze over the sheer beauty of the Superfortress, one Russian general called it 'dar Bozhii' ('a gift from God'). Moscow strongman Josef Stalin had no aircraft that could be used as a strategic bomber, and he realised how vulnerable this made him. He immediately ordered that the B-29 be 'reverse-engineered' by design bureau Tupolev, who in turn commenced production with the near-identical Tu-4 in mid-1945. By the time production ended in 1951, over 900 Russian 'B-29s' had been built.



Fired in the path of these B-29 Superfortresses, a descending cloud of black smoke marks the point of detonation for a phosphorus anti-aircraft shell. Having dropped their bombs on the Japanese home islands, the aircraft are heading for the coast on their way home. (*AAF*)

YAWATA AGAIN

Barely damaged in the first raid, the Yawata steel works remained a tempting target. In August, 98 Superfortresses moved forward from India and positioned themselves in China for another go at the steel-producing complex.

On the 20th, in a raid marred by crashes on take-off, delays and some navigation problems, most of the 67 B-29s that made it to the target dropped their bombs on Yawata, despite steady anti-aircraft fire and JAAF fighters.

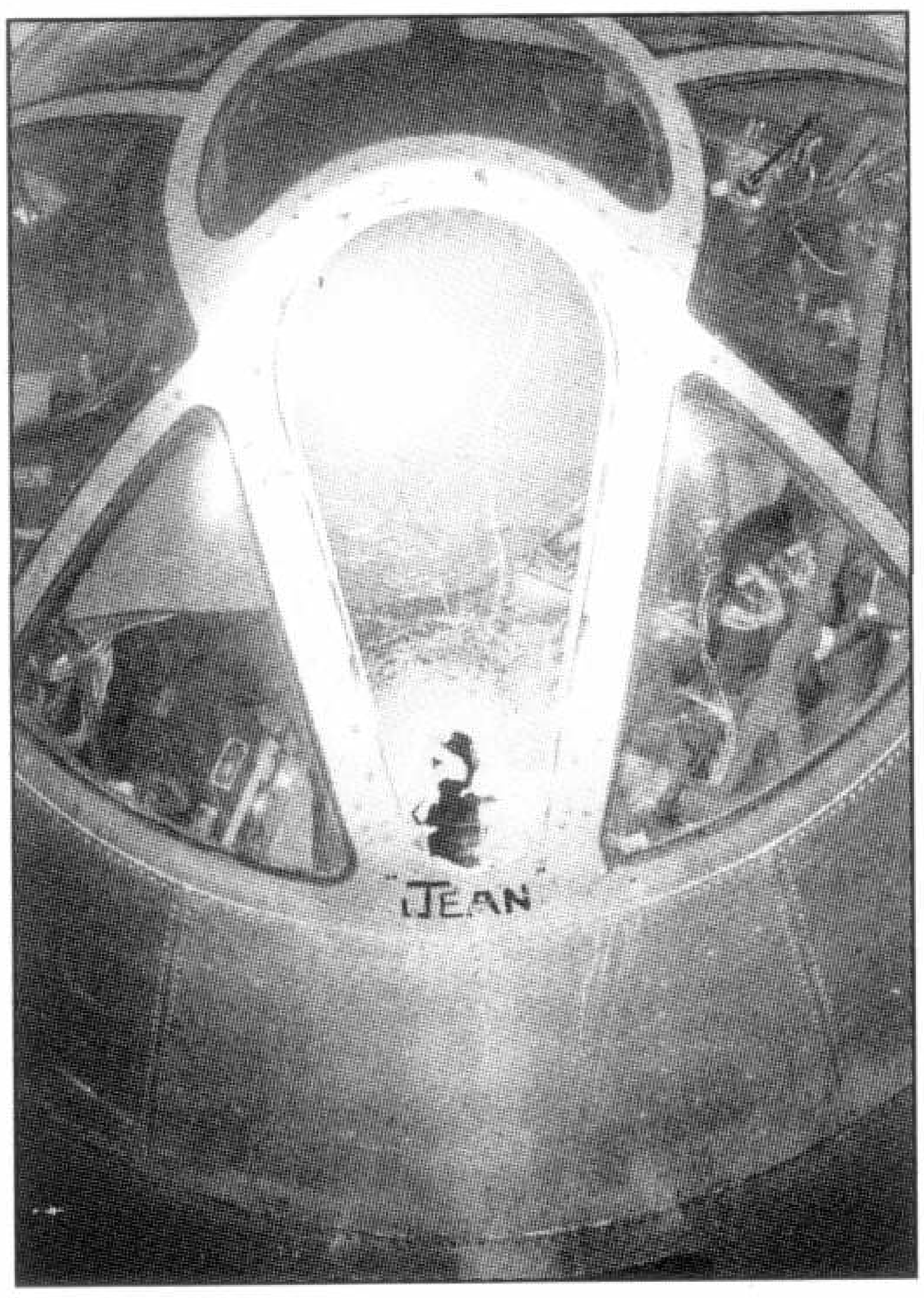
Approaching Yawata, anti-aircraft fire claimed at least two Superfortresses. With flak still swirling about, a solitary 4th Sentai Ki-45 'Nick' fighter, flown by Sgt Shigeo Nobe (with Sgt Denzo Takagi as his rear-seat gunner), made a head-on assault on Col Robert Clinkscales' B-29-BW 42-6334 *Gertrude C*. Nobe banked abruptly, his wings vertical to the ground, and sliced through the leading edge of the Superfortress's wing. Apparently fuel tanks on both aircraft ignited. A crew in another B-29 witnessed a stop-motion image of two aircraft stuck together in mid-air, but only for an instant. Then, in a flash of pyrotechnic brilliance, both the Superfortress (from the 468th BG) and the Ki-45 were consumed by red-orange flames.

Debris and flaming metal flew everywhere. A fragment slammed into the empennage of B-29-BW 42-6368 *Calamity Sue*, flown by Capt Ornell Stauffer, and it too went down. Later, intelligence analysts decided that the 'Nick' pilot, who had not opened fire, was on a suicide mission, and had rammed the *Gertude C* intentionally. Japan had not yet fielded its *kamikaze* forces (named for a 'divine wind' that had saved the nation at an earlier juncture in history by toppling a foe's naval fleet), but suicide by ramming would soon be a tactic employed by numerous JAAF units.

During this second Yawata raid, Japanese aircraft had attempted on several occasions to drop bombs on the B-29s from above, and a G4M 'Betty' bomber succeeded in releasing a device which detonated atop B-29-BW 42-24474, piloted by 462nd BG commander Col Richard H Carmichael. With his aircraft on fire, Carmichael (who had survived both the attack on Pearl Harbor and an earlier tour as a group commander in the Pacific) managed to keep the aircraft aloft long enough for most of the crew, including himself, to parachute from the bomber. They became prisoners, but survived the war.

That day over Yawata, B-29 gunners claimed 17 Japanese aircraft. Another B-29, damaged in battle, diverted to the Soviet Union. There, the crew bailed out successfully.

Flak struck the nose plate of this B-29, blowing a hole in the Plexiglas immediately in front of the aircraft's Norden bombsight. The name *"Jean"* no doubt referred to the bomb aimer's sweetheart. (*via Bill Hess*)



ENTER LeMAY

Maj Gen Curtis E LeMay, now one of the AAF's most accomplished bomber generals, took command of XX Bomber Command on 29 August 1944. Though LeMay reported to Washington-based chief of staff Gen Henry 'Hap' Arnold, who was also Twentieth Air Force commander, it was LeMay who was in fact the de facto boss of the Superfortress fleet.

Arnold apparently was lukewarm about XX Bomber Command CO, Brig Gen Kenneth Wolfe, whom he relieved summarily not so much because of his attitude toward him, but because he was enamoured of LeMay. Although the two men apparently did not know each other personally, Arnold knew that LeMay had done a superb job as a bomber commander in Europe. He wanted LeMay in India, and he got his wish.

LeMay revamped tactics, shifted from nocturnal flying to daylight precision attacks (a step he would reverse later in the war), and instituted 12-aeroplane formations aimed at concentrating defensive firepower. He went along on the 8 September mission by 108 bombers from Chinese bases to the Showa steel works. The pace of Superfortress operations was still building, very slowly, and XX Bomber Command mounted only one other mission in September – a revisit to the Showa works.

In October 1944, China-based Superfortresses struck Formosa and supported US troops landing in the Philippines. On the 25th of the month, XX Bomber Command attacked the Omura aircraft factory, and, as happened all too often amid the pressures of launching a mission, a B-29 (42-24504 *GUNGA DIN* from the 468th BG) crashed on take-off, killing all on board. Japanese fighters met the 50+ B-29s that arrived over Omura, some of them dropping air-to-air bombs and one reportedly firing air-to-air rockets. Gunners aboard the bombers received credit for seven fighters shot down, but they could not prevent B-29-BW 42-6281 *HEAVENLY BODY* from being riddled by gunfire. The Superfortress limped back to China where the crew bailed out. All but one survived.

The B-29 armada was growing rapidly, but bombing missions against Japan were still occurring only infrequently. In August, September and October, the total number of missions per month had been two or three. In November, there were five, including a 'milk run' to Rangoon. Sadly, a mission to Singapore in November claimed the life of Col Ted S Faulkner, CO of the 468th BG, and his entire crew. Faulkner was one of the most seasoned of bomber commanders, and his early experience in the war is featured in the companion Combat Aircraft volume *B-24 Liberator Units of the Pacific*.

At this juncture, it would have been a vast exaggeration to say that the B-29 was having a serious impact on the war – but that would soon change. No B-29 had yet been near Tokyo. That, too, would soon change.

The first F-13A Superfortress photo-reconnaissance aircraft was sent to XX Bomber Command in November as part of the 1st Photo Reconnaissance Squadron (PRS), which operated from Kharagpur, and then Hsinching, although its headquarters remained at Smoky Hill Army Air Field, Kansas. Soon

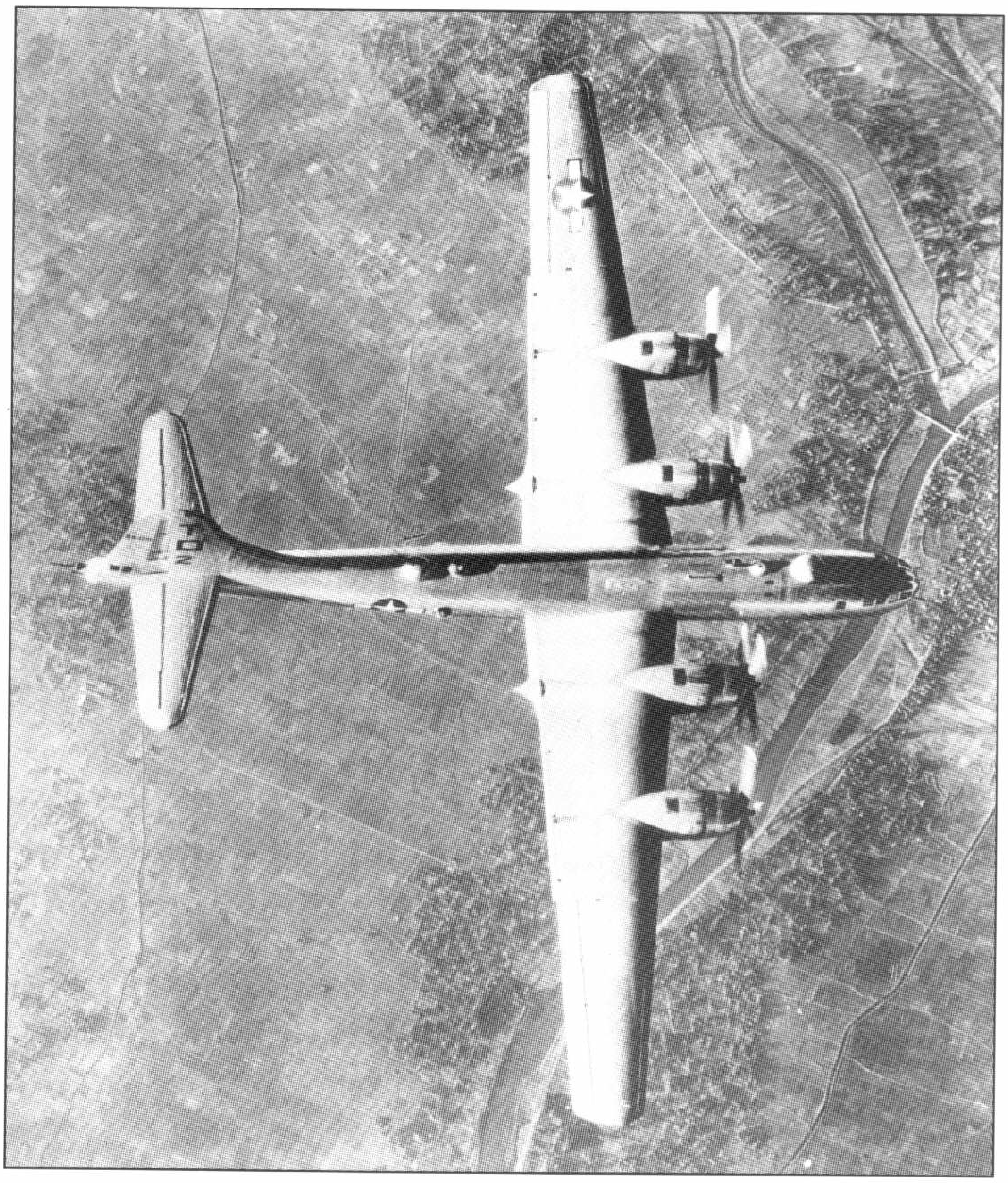
At the start of the B-29 campaign against Japan, key participants were (from left to right) Brig Gen Emmett 'Rosy' O'Donnell, commander of the 73rd BW, Col Leonard 'Jake' Harmon of the 497th BG and Brig Gen Haywood 'Possum' Hansell, commander of XXI Bomber Command. Forming the backdrop to this heavily posed photograph is a Superfortress of the 73rd BW's 497th BG. Hansell and O'Donnell clashed repeatedly in what one subordinate saw as a 'simple personality problem'. For other reasons, Hansell, who enjoyed a brilliant war record, was relieved of his command in January 1945 and replaced by Maj Gen Curtis E LeMay. (*Chester Marshall*)

afterwards, on 7 December, XX Bomber Command launched 108 B-29s against the Manchuria aircraft factory in Mukden (known today as Shenyang).

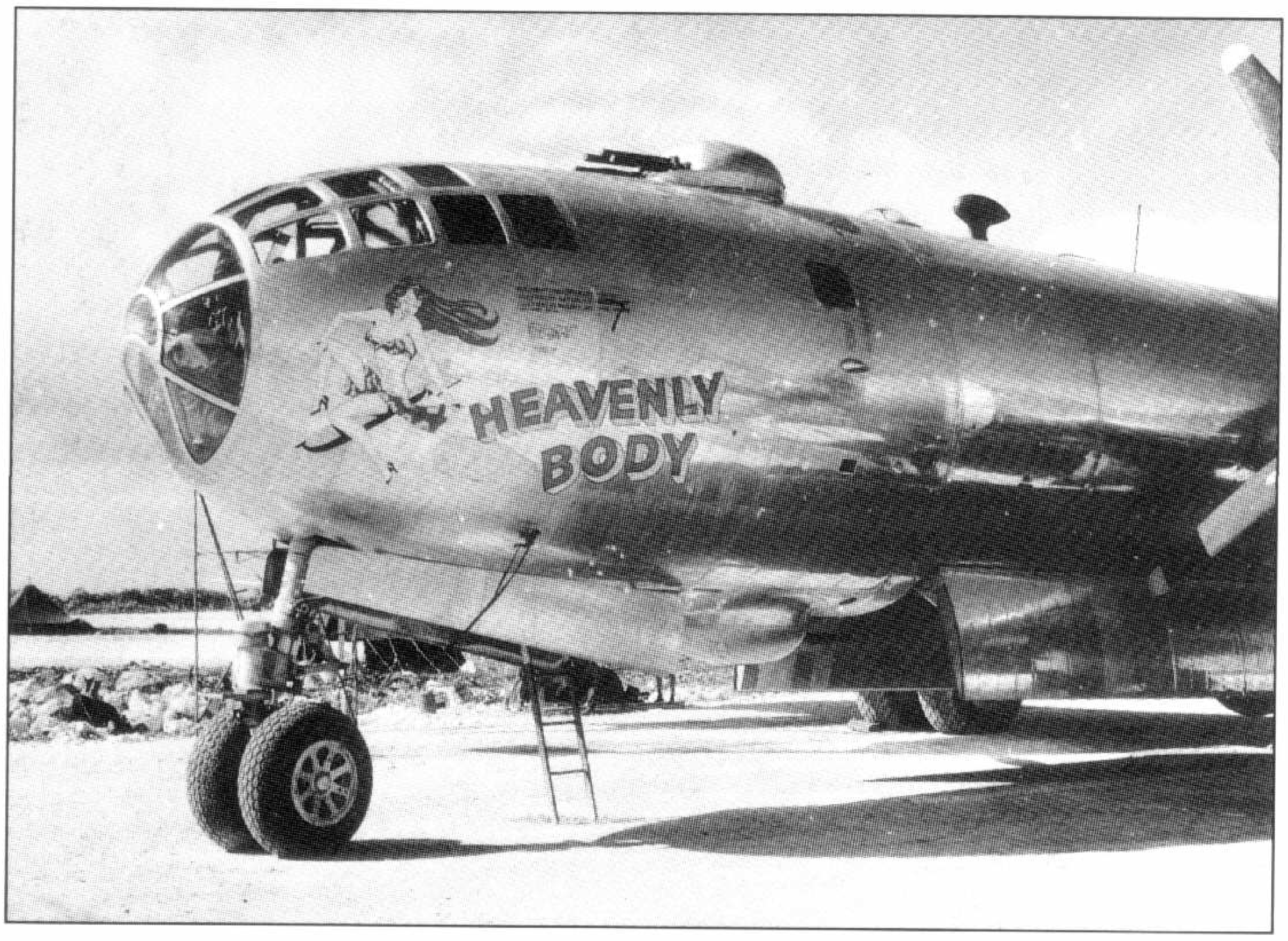
The story of XX Bomber Command would continue through the end of 1944 with missions to Hankow (18 December), Omura (21 December) and Shanghai (22 December). In the New Year, the India- and China-based Superfortress fleet would cease operations against targets in Japan, which were more accessible to XXI Bomber Command in the Marianas. XX Bomber Command would suspend operations on 31 March 1945, and the command's 58th BG would shift to the Marianas, where, as the end of 1944 approached, the battle was just beginning.

By the end of October 1944, XXI Bomber Command boss Brig Gen Haywood 'Possum' Hansell and 73rd BW CO Brig Gen Emmett 'Rosy' O'Donnell had begun to set up shop on Saipan. Hansell arrived after a lengthy journey aboard 42-24614 *JOLTIN' JOSIE - THE PACIFIC PIONEER*, piloted by Maj Jack J Catton.

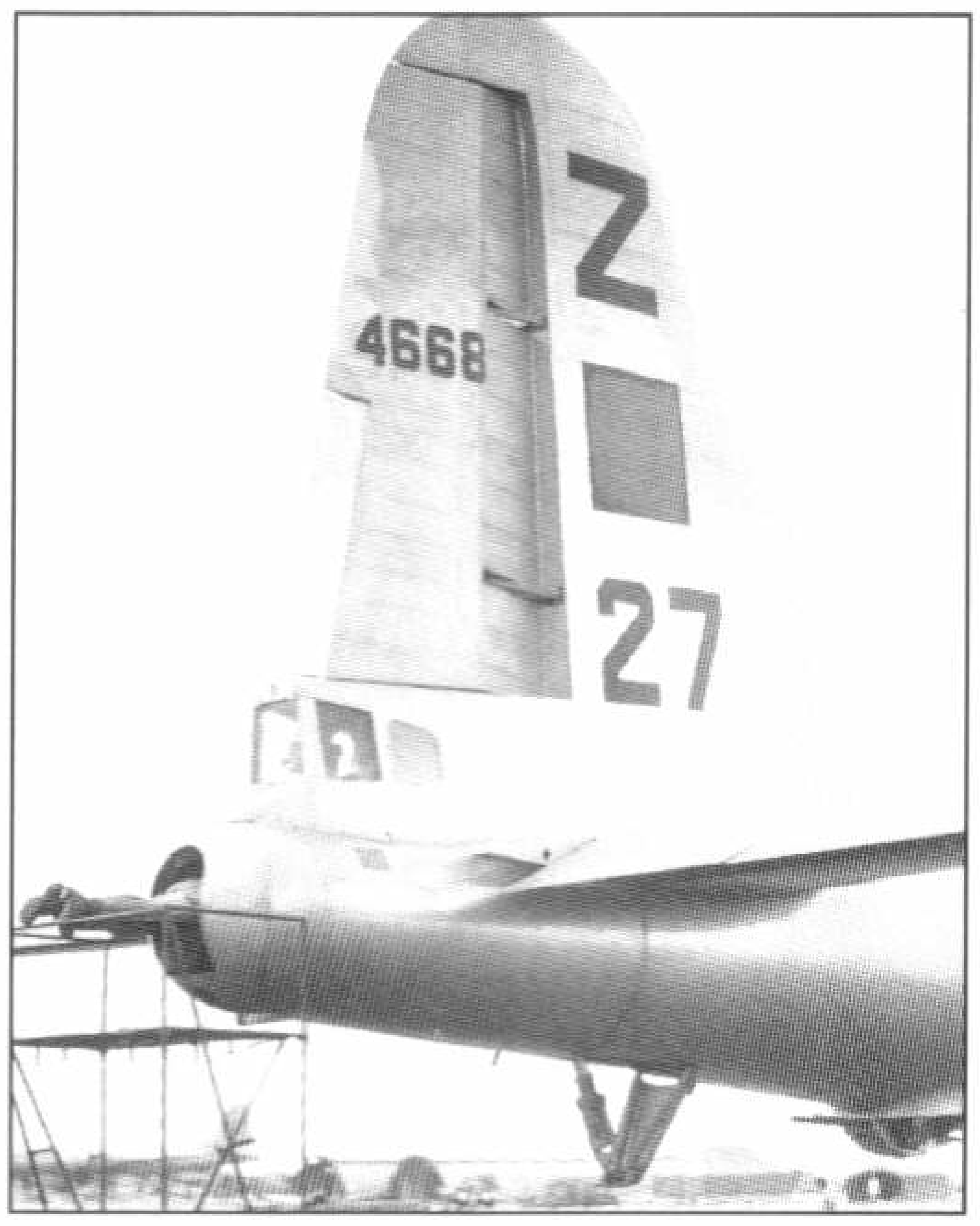
The 73rd BW boasted the 497th, 498th, 499th and 500th BGs. The wing's first raid (on 28 October) was a 14-aeroplane shakedown operation against the island of Truk, followed by five more training missions against soft targets not located in the Japanese islands.



When this photograph was released by the Army Air Forces on 20 December 1944, it claimed that it was the first picture of a B-29 over the Japanese mainland. Wearing the T Square 2 fin marking of the 498th BG/73rd BW on its fin, this aircraft (B-29-BW 42-24605 *THE HEAT'S ON*) is about to pass over the Tama River west of Tokyo. This machine was ditched on the return leg of a mission to the Japanese capital on 27 December following mechanical failure. Only four of its crew were rescued. (*AAF*)



B-29-BW 42-6281 *HEAVENLY BODY* was also a casualty of war, being lost to fighters on the 25 October attack on the Omura aircraft factory. (*Bill Hess*)



Z Square 27 of the 500th BG/73rd BW was amongst the first B-29s to arrive in the Pacific theatre. In this view, the cover has been removed from the ventral gun turret and the tail guns have been replaced by the legs of a prostrate groundcrewman! This photograph also provides an excellent view of the tail skid that replaced the ventral fairing on production Superfortresses. The location, of course, is Isely Field, Saipan, Marianas. (*via David Ostrowski*)

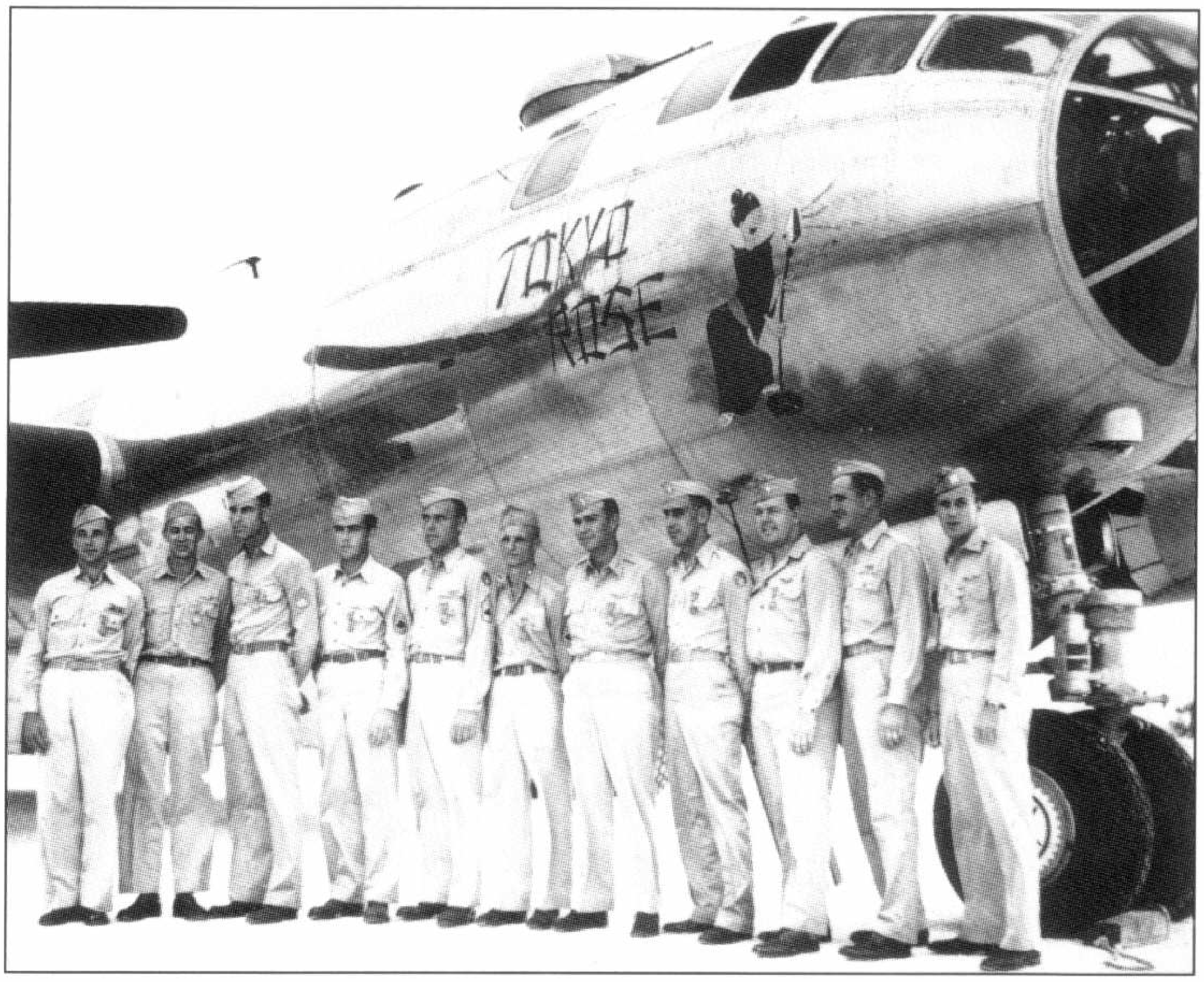
At first, Hansell and O'Donnell found themselves in the awkward position of having more generals than bombers on Saipan! The number of Superfortresses went up when two F-13As arrived on 30 October following a long ferry flight from Smoky Hill Army Air Field. Their crews were exhausted, but that did not prevent Capt John D Steakley from launching at 0550 hrs on 1 November. Everyone knew that big raids on Tokyo were in the offing, and Steakley's job was to get the all important reconnaissance photographs that would ease the mission planning process.

In performing his mission, Steakley's F-13A (42-93852) became the first American warplane to venture over Tokyo since Lt Col Jimmy Doolittle's B-25B Mitchell raid of 28 months earlier.

In typically clear skies (later, the capricious weather over the Edo plain where Tokyo was situated would vex American crews), Steakley flew around as if he owned the place, shooting at least 7000 still frames of the Japanese capital. His F-13A criss-crossed Tokyo as if its crew were thumbing their noses at the Emperor's defences.

Only as they turned for home did the F-13A crew come under scrutiny from a Ki-44 flown by Capt Jun Shimizu of the 47th Sentai. He got the closest of the numerous 'Tojos' scrambled in response to Steakley's bold overflight of the Japanese capital, and although the F-13's tail gunner put the Ki-44 in his crosshairs, he did not fire for Shimizu broke off his attack when he failed to close on the departing Superfortress.

A weary Steakley returned to Saipan with a wealth of valuable photos. Soon afterward, he and his crew named their aircraft *TOKYO ROSE* after



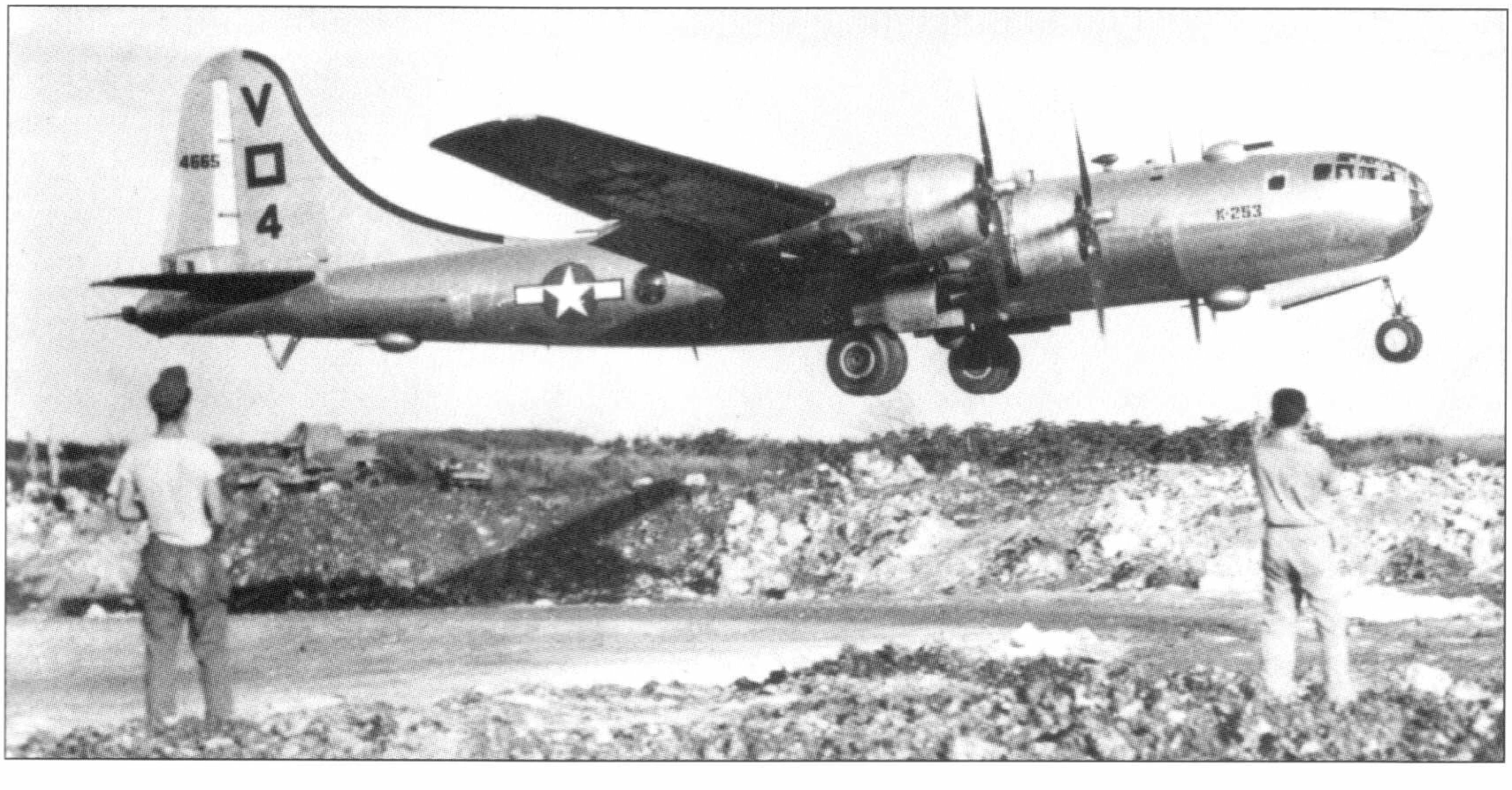
Capt John D Steakley (far right) was awarded the Distinguished Flying Cross for his photo-reconnaissance mission over Tokyo in F-13A Superfortress 42-93852 on 1 November 1944. As seen in this group photograph, Steakley's F-13 was subsequently christened *TOKYO ROSE* after the well-known Japanese propaganda broadcaster. Starting life as a Renton-built B-29A-BN, 42-93852 was modified to F-13A reconnaissance configuration at the Continental Airlines Denver Modification Center. (*AAF*)

Superfortresses on a daylight mission approach Japan's most famous landmark, Mount Fuji, to the south-west of Tokyo. As previously mentioned, Brig Gen Haywood 'Possum' Hansell was a strong proponent of daylight bombing missions flown in formation. That remained the strategy throughout 1944, but the following year there would be a shift to low-level missions in which vast numbers of bombers ignored formation and attacked on their own. By then Hansell would be gone. (*AAF*)

incapable of striking back. On 27 November 12 Zeroes from the Navy's 252nd Kokutai sortied from Iwo Jima, accompanied by a pair of C6N 'Myrt' reconnaissance aircraft. Flying 600 miles to attack Isely Field, on Saipan, the Zeroes strafed the base and destroyed four B-29s, as well as killing at least one airman. The raiders were swiftly despatched by flak batteries on the island, and one Zero crashed into a throng of 500th BG personnel, seriously wounding several of them.

The B-29 force struck back when 86 bombers headed for Honshu. The mission was marred, however, by the loss of B-29-41-BW 42-24656 *ROSALIA ROCKET* of the 881st BS/500th BG, piloted by group CO Col Richard King. Also on board the bomber was Deputy Chief of Staff for Operations of the 73rd BW HQ, Col Byron Brugge. An after-action report described the bomber's fate:

'At approximately 1416 hrs local time a "Hamp" (actually a Ki-61 "Tony") came from high one o'clock and attacked the lead ship, which



B-29-BW 42-24665 of the 398th BG departs Isely Field, Saipan, on the wing's first mission to Tokyo on 24 November. Like most of its contemporaries in-theatre, this aircraft wears a three-digit 'K' number (K-253) on the nose. Individual markings and colourful art still lie in the future. This take-off portrait also clearly illustrates the way US Navy construction battalions, known as Seabees, carved airfields out of rock and coral. (*via David Ostrowski*) was 1 Victor 534 (*ROSALIA ROCKET*). Hits were observed on the inside of No 2 engine. Two large pieces of metal were observed flying off either from No 2 nacelle or inner wing. Shortly after this the lead ship feathered No 4 engine, then unfeathered it and feathered No 3 engine. By this time there was smoke mixed with gasoline trailing over left inner wing panel. As soon as No 3 engine was feathered, the lead ship lost so much speed it fell behind the formation.

'Last sighting of 1 Victor 534 in distress was by the right blister gunner. The wheels were down, bomb-bay doors open (possibly partially), black smoke was coming from the feathered engine on right side and either the No 2 engine or the left inner wing fuel was aflame. The aeroplane was in 30-degree dive, with five to twelve enemy fighters carrying on continuous attacks. When last seen, 1 Victor 534 in distress was in the northern part of the city at an altitude of 24,000 ft, on a heading of 80 degrees.'

The Ki-61 that inflicted the initial damage on *ROSALIA ROCKET* was flown by future ace Capt Teruhiko Kobayashi, the 24-year-old CO of the 244th Sentai. Of the 12 crewmen aboard the B-29, nine managed to bail out, although only three survived captivity.

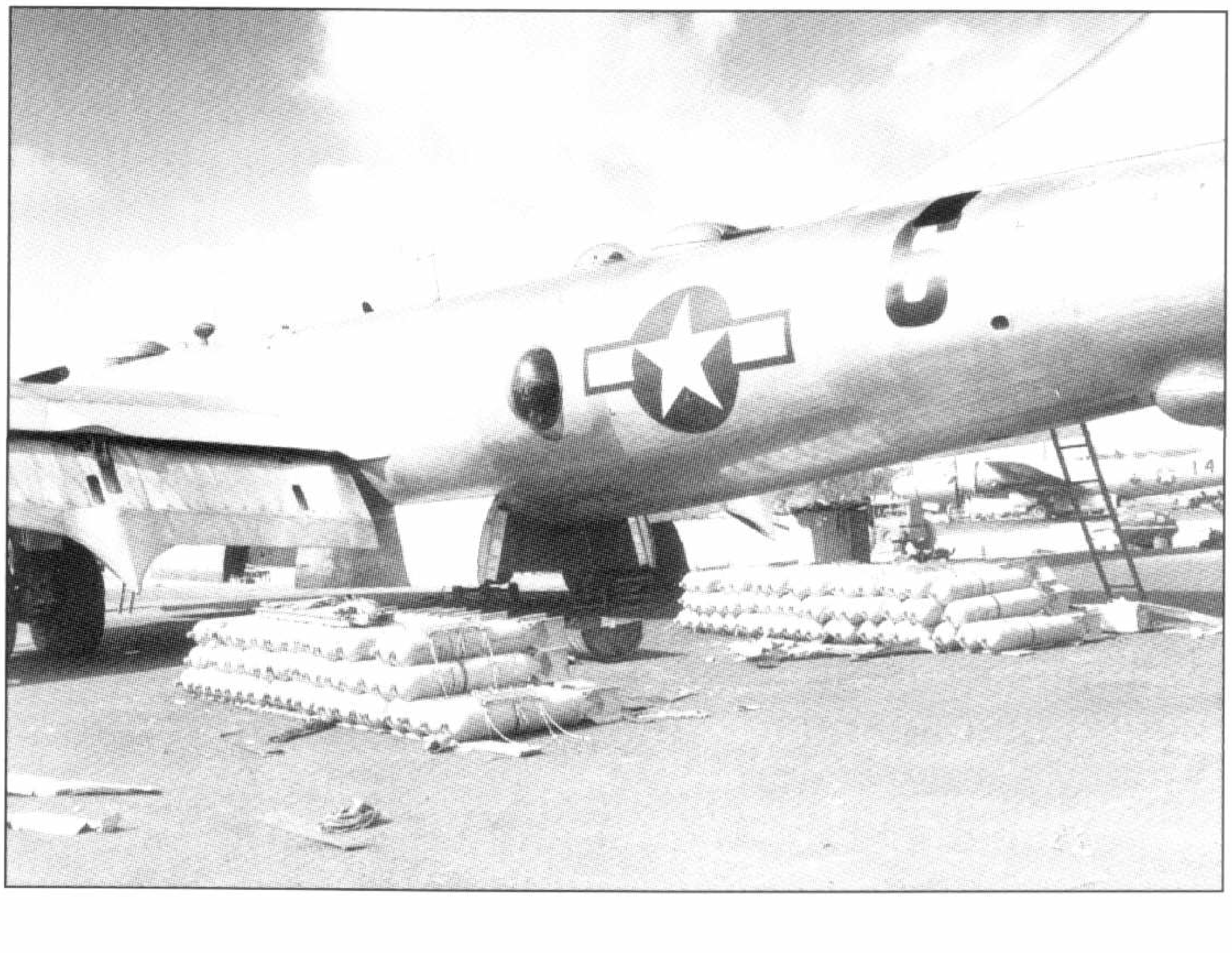
BOMBING IWO

The ability of the Japanese to attack Saipan with aircraft based on Iwo Jima was a thorn in the side of Gen Hansell and his troops. On 7 December Japanese aircraft again strafed and bombed Isely Field, and although anti-aircraft gunners laid claim to six enemy aircraft shot down, the attack destroyed three B-29s and damaged many more. The following day Superfortresses bombed Iwo Jima, hoping to neutralise the air threat.

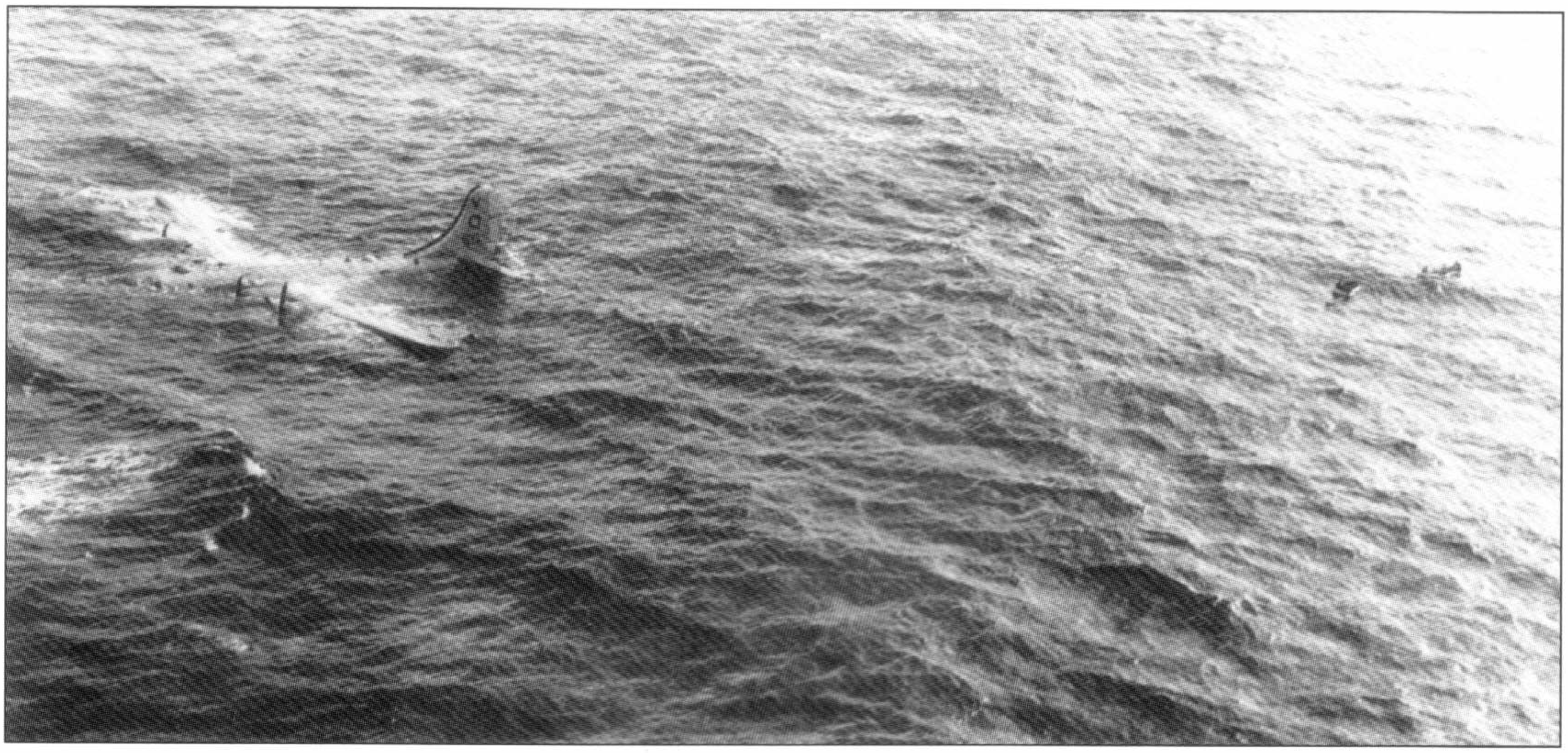
On 13 December Hansell's command launched 90 Superfortresses against the Mitsubishi aircraft factory at Nagoya. Some 71 B-29s reached the target, a number of which were carrying incendiary cluster bombs. The Americans had been developing firebombs since the earliest days of the war, well aware that most Japanese buildings were made of wood and paper. Incendiaries were also deemed useful against a facility like the one in Nagoya, where fuels and chemicals were stored in an industrial setting.

Four B-29s were damaged badly enough that they needed to ditch after the Nagoya mission – one each from the 498th and 499th BG and two from the 500th BG.

The heavy bombers went to Nagoya again on 18 December, although crews encountered such heavy cloud cover that they were forced to bomb by radar. This time, Japanese fighters engaged the force, which consisted of 63 Superfortresses out of the 89 that had launched. The Japanese shot down one 499th BG B-29 over the target, two more ditched and one crashed upon its return to Saipan. The crew of the crashed aircraft walked away from the mishap.



B-29 and bombs. The Americans tested incendiary bombs from the beginning of the war, and made extensive use of them against targets in the Japanese home islands. Each of the units seen here is a 500-lb (227-kg) finned cluster of M-69 incendiaries, each cluster holding 38 bombs. A Superfortress could carry 40 clusters, or about 1520 fire bombs. Each M-69 remained ignited for about four to five minutes, and was capable of burning through almost any material. (*via David Ostrowski*)



On 13 December 1944, B-29-BA 42-63447 V Square 80 of the 499th BG was forced down at sea en route to Saipan after bombing the Mitsubishi aircraft factory at Nagoya. This view of the crew in lifeboats, and the Superfortress slipping beneath the surface, was taken from the US Navy PBY-5A Catalina that rescued the survivors. (*US Navy*)

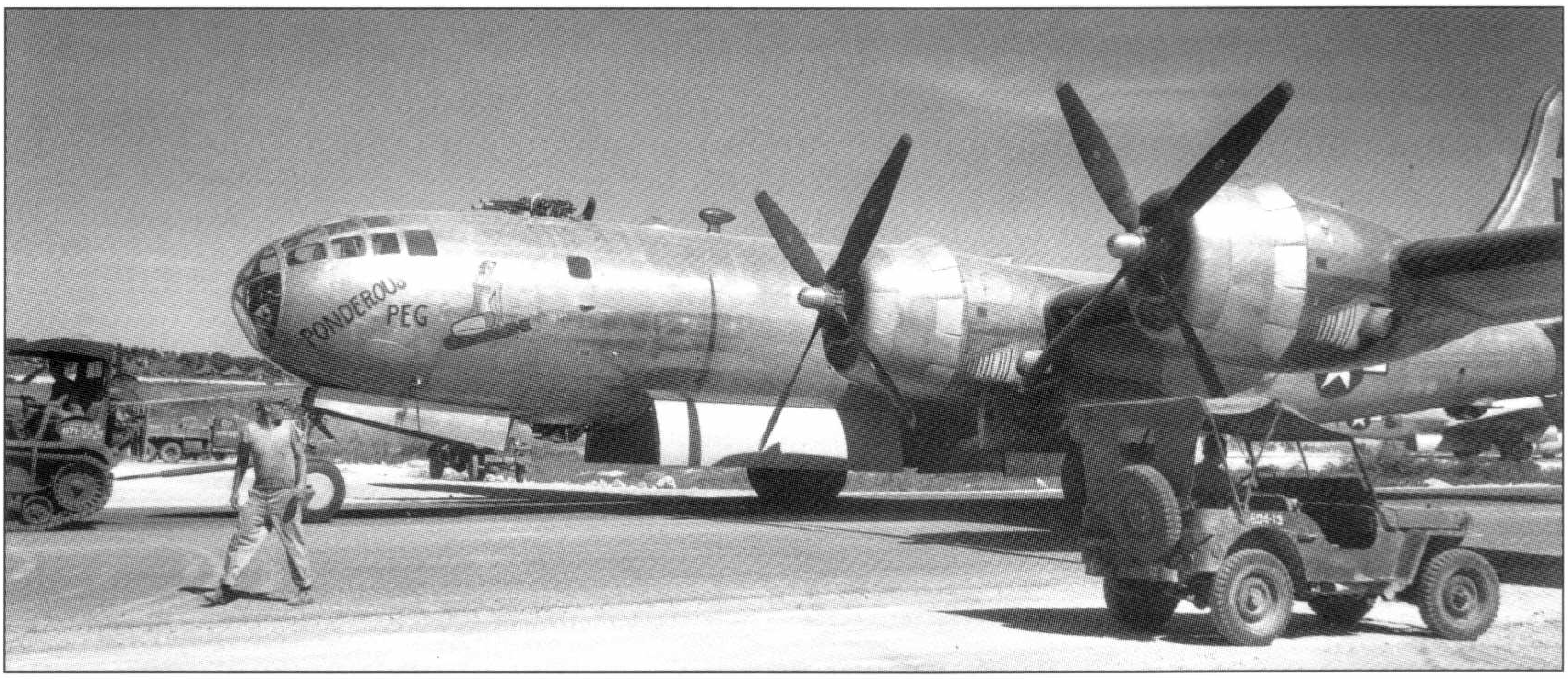
Over Japan, Superfortress crews were constantly amazed by the weather conditions they were encountering. The high-altitude jetstream was still largely unknown except to a handful of aviation experts. Hansell's wing and group commanders were only now learning that their bombers could be battered by high winds, and that high-altitude conditions over Japan were riskier than anything previously encountered. To help get a handle on the situation, Hansell ordered a weather reconnaissance mission after every major raid.

The first weather mission by a trio of B-29s from the 869th BS/497th BG was led on the night of 6/7 December by Maj Morgan's *DAUNTLESS DOTTY*. The first weather mission to suffer an aircraft loss was the 36th such sortie flown 11 days later, a B-29 named *SPECIAL DELIVERY* being forced to ditch. Ten of its the twelve-man were rescued.

Following a 22 December return trip to Nagoya, the Saipan-based command sent 23 Superfortresses to bomb Iwo Jima airfields on Christmas Eve. That did not prevent the Japanese from retaliating on Christmas Day, with strikes by two-dozen aircraft on Saipan. The raid destroyed a B-29 and damaged two others. It proved to be the last time Iwo-based warplanes struck the B-29 force successfully prior to the Marines landing on Iwo Jima the following February.

As 1944 drew to a close, the 73rd BW on Saipan was becoming a seasoned outfit, having learnt plenty of lessons – the powerful impact of the jetstream winds over Japan was always at the top of the list. The wing returned to Tokyo on 27 December for its final mission of the year, and lost B-29 42-24613 of the 498th BG when it suffered double engine failure on take-off. Crashing into the sea between Saipan and Tinian, only three crew survived. Of the 72 bombers despatched, just 39 actually reached the primary target, where B-29 crews encountered moderate anti-aircraft fire and persistent attacks by Navy and JAAF fighters – more than 272 separate engagements would be recorded by B-29 crews.

The only bomber lost in the vicinity of the target area was Wichita-built B-29-BW 42-24642 *UNCLE TOM'S CABIN NO.2*, the 498th BG machine being attacked by a trio of Ki-61s from the 244th Sentai just one minute from bomb release. In the vanguard of a formation of nine

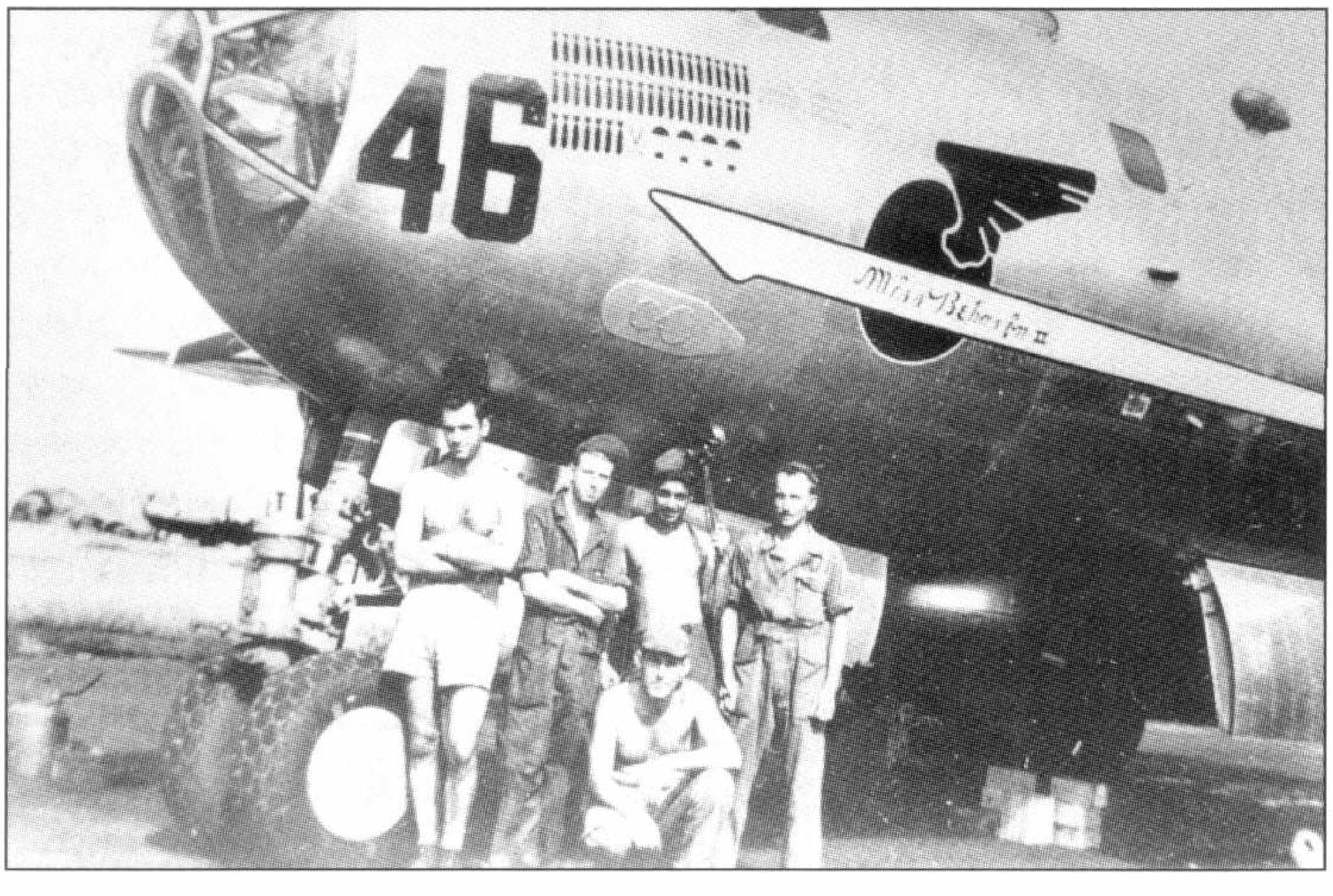


Maintenance men used a variety of vehicles, as well as plenty of perspiration, to move Superfortresses around on the ground. Here, B-29-BA 42-63431 *PONDEROUS PEG* of the 871st BS/497th BG is towed by a ubiquitous Cleveland Cletrac MG1 at Isely Field in late 1944. *'PEG* wore an A Square 7 tail marking and evocative nose art that appeared in two versions, with this side featuring a scantily-clad young woman riding a bomb. The 'last four' of its serial appeared on the fin. On 25 February 1945, *PONDEROUS PEG* was lost in a mid-air collision with another 497th BG Superfortress. (*via David Ostrowski*)

Superfortresses, the bomber had part of the central fire control gunner's turret blown off by a short burst of fire from the 'Tony' flown by MSgt Takeo Yoshida. The Japanese pilot then rammed the right side of the B-29 with his fighter's wing, ripping open the bomber from nose to wing and taking its No 3 engine off.

UNCLE TOM'S CABIN NO.2 briefly remained in formation, with pieces of equipment pouring out of the hole in its side. Then, the bomber began to fall away, hounded by additional fighters, including the Ki-45 of the 53rd Sentai's 2Lt Yasuo Watanabe. He also rammed the stricken B-29 on its port side, yet the bomber still remained in the air. Several minutes elapsed before *UNCLE TOM'S CABIN NO.2* finally succumbed to the overwhelming damage inflicted upon it, the B-29 crashing headlong into Tokyo Bay. A plume of smoke marked the spot where the bomber had hit the water. Three crewmen managed to bail out, and they were picked up by local fishermen and made PoWs.

The third bomber lost on this final mission of 1944 was 498th BG B-29 42-24605 *Heat's On*, which the crew was forced to ditch due to mechanical failure on their way home. Four crewmen were picked up by the destroyer USS *Fanning* some 180 miles from Saipan at 2010 hrs the following day.



Wrested from the Japanese by force of arms, the island of Saipan was gradually transformed from a tropical backwater into a busy airfield – and a setting where more and more crews could pose for informal snapshots in front of their bombers. Boasting an already impressive bomb log, B-29A-1-BO 42-93833 *Miss Behavin II* served with the 500th BG/73rd BW in 1944-45. (*via Norman Taylor*)

1945

At the start of 1945 – the year of greatest human suffering in all of man's history – the world was paying little attention to the B-29s which would operate for just a further three months with XX Bomber Command in India and China. With just cause, B-29 crews in India and China felt that their contribution was being overlooked, shrouded in the shadow of crews operating from Pacific islets.

Typical of the contribution by these men was a 2 March 1945 mission from Chinese bases to Singapore, which was still in the clutch of the Japanese. The 468th BG managed to lose two Superfortresses of the 64 that began the mission, these being the last B-29s to fall in the China–Burma–India Theatre. A follow-up Singapore visit by 24 B-29s on 29 March produced good bombing results, but was otherwise eventless.

The 58th BW, consisting of the 40th, 444th, 461st and 468th BGs, and led by one-time West Point football hero Brig Gen LaVerne 'Blondie' Saunders, broke off from XX Bomber Command and moved to Tinian. With its arrival in the Pacific, the wing adopted new markings using a large triangle on the fin enclosing the group letters S, N, U and I.

As for XX Bomber Command, this outfit went out of business in India on 31 March 1945. In less than ten months, the command had flown 49 missions and suffered only 37 combat losses. Under Brig Gen Kenneth Wolfe (until July 1944), Saunders (until August 1944), Maj Gen Curtis LeMay (until January 1945) and Brig Gen Roger Ramey (until dissolution), XX Bomber Command had done an excellent job in a pioneering environment. Thanks to these veterans paving the way with the first B-29 operations, the job would be easier now that all of Twentieth Air Force's bombers were in the Pacific with XXI Bomber Command.

Although B-29 operations in China and India ended early in 1945, the new year marked a fresh beginning for Superfortress crews based in the Marianas. Looking for increased use of incendiary bombs, Twentieth Air Force headquarters ordered a firebomb raid on a familiar target, Nagoya,

These men were not members of the AAF, and they did not fly B-29s, but without them not a single Superfortress mission would have reached Japan. Members of the Navy's 13th Construction Battalion – the fabled Seabees – pose on Tinian, where they constructed the busiest airfield in the world. Carpenter Martin Gubba (kneeling, front row, fourth from right) typified the young sailors who often did their work under fire, and who transformed Pacific atolls into bomber bases. (*Gary M Gubba*)

and home of aircraft manufacturer Mitsubishi. Ninety-seven B-29s launched on this mission, carrying two types of incendiary cluster bombs.

This mission, controlled by XXI Bomber Command, took place on 3 January 1945, and as with previous raids, an aircraft was lost right at the start – the 498th BG's B-29-BW 42-24748 crashed on the volcanic island of Anatahan in the Marianas. Some 79 bombers reached the target, but the formation was split up and only 57 dropped on the primary target.

The B-29s encountered swarms of fighters over Nagoya, some of which made aggressive firing passes on the 497th BG's *AMERICAN MAID*. In the starboard rear blister, gunner Sgt James Krantz was blown out of the aeroplane by sudden decompression after gunfire had narrowly missed him. A harness of his own design prevented him from falling six miles to the ground. Instead, Krantz dangled outside the aircraft in the frigid airstream. Other gunners struggled to pull him back in – in vain. Like an unwanted appendage to the B-29, he hung there, being slapped about, fortunately with his oxygen mask still attached and working.

After a couple of attempts, and about ten minutes, a trio of crewmembers combined their strength and succeeded in pulling Krantz back inside the bomber, which returned to Isely Field.

Krantz, who recovered fully from his sub-zero ride outside his bomber, ironically fared better than XXI Bomber Command boss Maj Gen Haywood 'Possum' Hansell, who was under pressure from his superiors. The B-29 campaign in general, and the Nagoya raid in particular, did not seem to be working well. Apart from the loss of two B-29s that were rammed over Nagoya (and two more that ditched on the way home), the latest incendiary bombing was determined to have been largely ineffectual. After months of trying, bomber crews still had not found a way to cope with the winds and weather at high altitude over Japan.

Hansell had enjoyed a superb record as a leader in Europe. He had been one of the pioneers of the B-29 campaign. On Saipan, he had eased frictions with 73rd BW CO, Brig Gen Emmett 'Rosy' O'Donnell. Hansell had every reason to believe that he was doing a good job and that, as the B-29 force continued to grow in size, he would remain in command.

He was wrong.

RETURN TO TOKYO

Winds, weather, and the simple element of misfortune besieged the Superfortress crews when they returned to Nagoya on 14 January. The B-29s were engulfed by Japanese fighters, and most had to bomb through haze. Five B-29s were lost, although *LASSIE COME HOME* (B-29-BW 42-24609) returned to Saipan on two engines, where its pilot made a shaky landing – the last ever for this bomber – that saved the crew. Pilot Maj Edward C Lass, for whom the aeroplane had been named but who did not go on the mission, was a witness to the B-29's two-engined return.

On that mission, the loss of one aircraft was remembered later by a squadronmate:

'Capt Leonard L Cox was KIA (killed in action) on 14 January 1945 aboard B-29-BW 42-24595 *PACIFIC UNION* of the 869th BS/497th BG. The No 3 engine caught on fire on their way to bomb Nagoya. Cox released the bombs and fragments struck the aircraft. Cox attempted to ditch the aircraft and the centre section of the aeroplane exploded right

Not quite visible in this study of a Superfortress mishap is the port wing, which almost certainly sustained mortal damage when the aircraft veered off the runway at North Field, Tinian. The aircraft was assigned to the 505th BG/313rd BW. (*via David R McLaren*)

before they struck the water. The aircraft crashed north-west of the Marianas about a third of the way to Iwo Jima. Four of the eleven-man crew survived the crash and were picked up by the Navy in life-rafts.'

On 19 January B-29s from Saipan struck the Kawasaki aircraft plant at Akashi. Of 80 bombers that made it into the air, 62 dropped on the primary target. No aircraft were lost, and the mission was deemed the first true success of the year. And, for a time, it would also be the last.

A 23 January return to Nagoya was made in the face of furious winds and heavy clouds. Seventy-three Superfortresses launched, but only 28 dropped on the primary target. Two aircraft were lost. The mission to Tokyo four days later produced even worse results. Fighters were everywhere, and of the 64 B-29s (of the 76 launched) that made it to Japan, nine were lost – the bulk of these were brought down by ten ramming attacks by JAAF fighters.

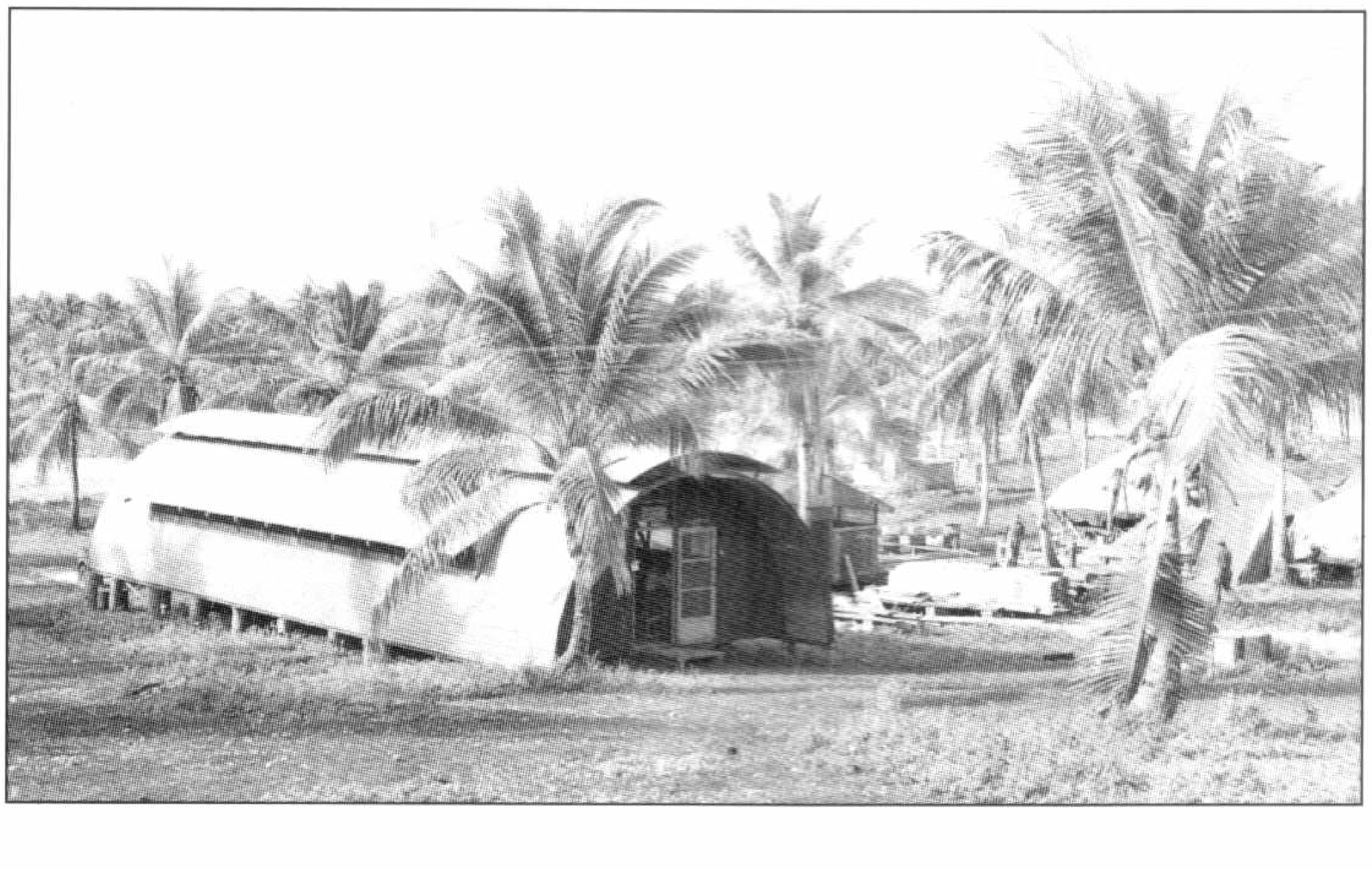
The 313th BW, commanded by Brig Gen John H Davies, joined the fight from North Field, on Guam, in February with the 6th, 9th, 504th and 505th BGs. The 314th BW, led by Brig Gen Thomas S Power, also arrived in-theatre soon afterwards. It initially controlled the 19th and 29th BGs, which were later joined by the 39th and 330th BGs. The wing adopted a markings system similar to that employed by the 73rd BW, but with an outlined triangle as a wing symbol enclosing group letters L, X, E or K.

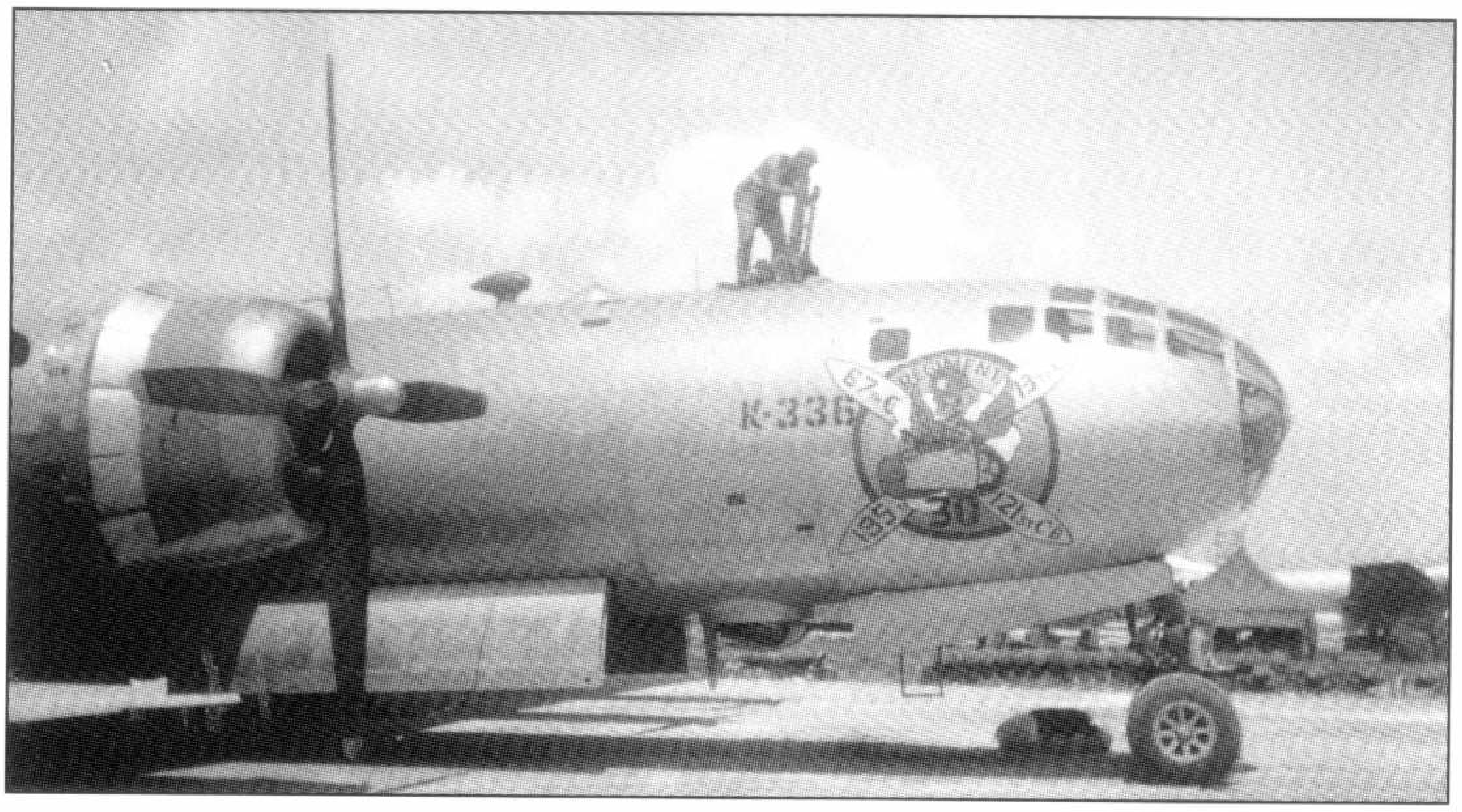
LeMAY ARRIVES

On 20 January Maj Gen Curtis E LeMay arrived from India to relieve Hansell as commander of XXI Bomber Command. In later years, historians would conclude that Hansell had done nothing wrong, but had suffered a run of bad luck. In fact, LeMay initially made no changes. B-29s continued to strike Japan from high altitude, where the winds were horrendous.

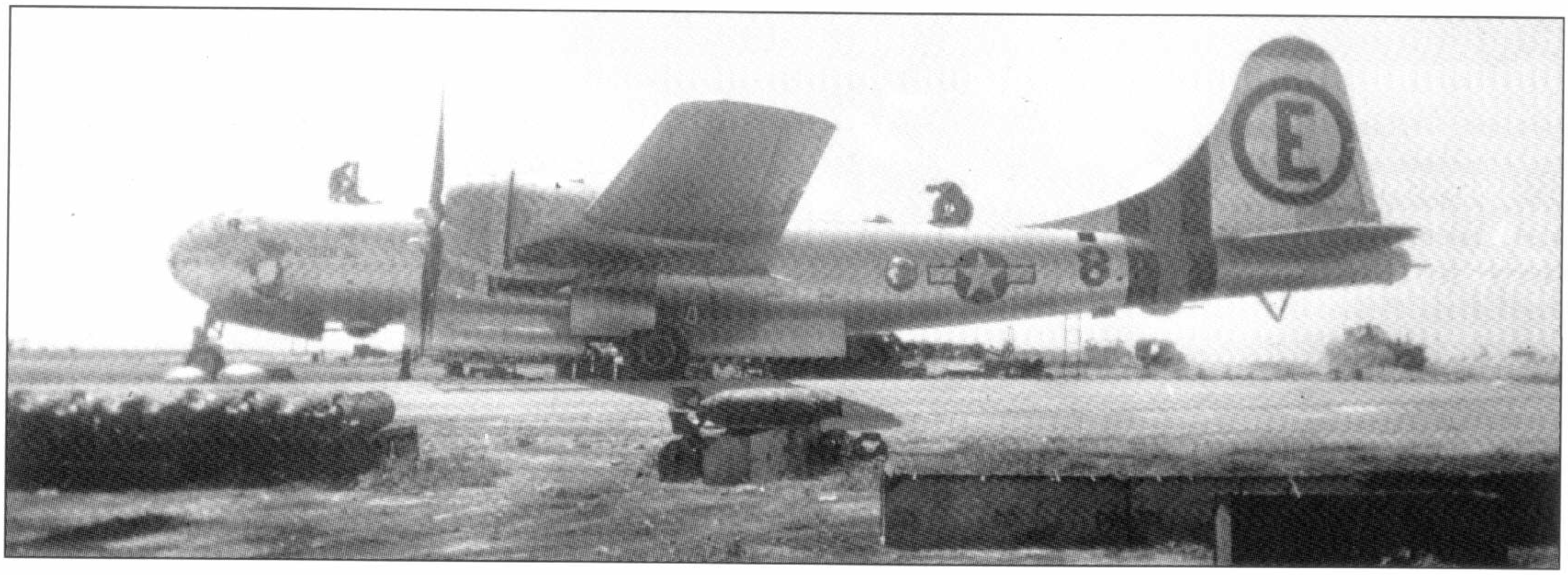
But the winds were not horrendous on 4 February, when XXI Bomber Command launched its first full-up mission under LeMay's command involving both the 73rd and 313th BWs. Likewise, conditions were better when the two combat wings struck the Nakajima plant at Ota, near Tokyo, six days later. LeMay, who had ideas but had not yet instituted changes, seemed extraordinarily blessed. There was no reason for

Guam had a long pre-war history as a US territory, so it already possessed the infrastructure to support an influx of American troops and aircraft. This Quonset hut houses the enlisted mens' day room for a bomb squadron based at North Field. Living accommodation and work facilities were never luxurious for B-29 crews, but they generally fared better than other American fighting men in the Pacific. Many of the buildings at North Field remained in use for decades after the war, and long after the facility had been renamed Andersen Air Force Base. (*Robert T Doul*)





Left and below
Although not visible in these photographs, B-29-BW 42-24806 eventually wore the titling *NOV-SCHMOZ-KAPOP* (inspired by a popular cartoon character of the period) on its port side and *THE TOKYO TRAVELER* on the starboard side. Assigned to the 504th BG, the bomber only featured artwork on its forward fuselage in early 1945. (*Steve Savko*)



LeMay to be doing any better than Hansell, but the overall bombing results had undoubtedly improved.

In retrospect, Hansell faced an impossible task, trying to implement a strategic bombing campaign with green crews and untested aircraft against enemy targets more than a thousand miles away, and weather conditions never previously encountered in warfare (in part because bombers had never previously flown so high). Add maintenance problems, logistics

COMMANDING GENERAL
FIGHTER COMMAND

In addition to being responsible for the Twentieth Air Force, Gen Henry H 'Hap' Arnold was in charge of the entire AAF, which in 1945 had a personnel strength of 2,282,259 men. Although Arnold spent much of his time in the new Pentagon building near Washington, he nevertheless made frequent trips to the battle area. Here, the general is awarding medals to fighter pilots on Iwo Jima for their achievements in escorting Superfortresses over Japan. Arnold is shaking hands with squadron commander Maj Harry Grim. (*Chester Marshall*)

nightmares, and a unique command relationship (Hansell reported directly to the always-impatient AAF chief, Gen Henry H 'Hap' Arnold), and it appears that the seeds of Hansell's dismissal were sown almost from the moment he took command of the fledgling B-29 force.

IWO JIMA

On 19 February the largest force of US Marines ever assembled journeyed to a tiny hunk of coral and slag close to the Japanese homeland. Iwo Jima is just five miles long and two-and-a-half miles wide at its widest point, and has been described as looking like a pork chop when viewed from the air. Located west of the midway point between Saipan and Tokyo, the island is mostly barren, with a 556-ft extinct volcano on its southern tip (Mt Surabachi), black sand, rocky cliffs and no source of drinkable water

For the amphibious assault on Iwo Jima, 880 ships and hundreds of warplanes backed the invasion force of 74,000 Marines. LeMay's B-29 crews were among the Army, Navy and Marine aircraft that pounded Iwo in the longest sustained aerial offensive of the war. 'No other island received as much preliminary pounding as did Iwo Jima', said Adm Chester Nimitz, commander-in-chief of the Pacific command.

It helped little. Entrenched in caves, Japanese troops – who were outnumbered by the Marines five to one – fought on for 35 days. It was a horrific, pointblank battle. For the men on the ground it was unspeakable. But it almost immediately provided a boon to those who had to fight in the air. Iwo was neutralised as a base for Japanese aircraft that were able, with difficulty, to reach Saipan. Never again would B-29s on the ground come under air attack.

Ultimately, Iwo would be a base for emergency landings by B-29s, and for everyday operations by escort fighters.

The first Superfortress arrival on Iwo Jima came sooner than anyone had expected – on 4 March. Records no longer tell us whether the aircraft (B-29 *DINAH MIGHT* from the 9th BG) was heading to or coming from Japan, but its pilot, Lt Raymond F Malo, acted against orders when he chose to land on Iwo.

After twice scanning the island's airstrip, known as Motoyama airfield Number 1, he simply ignored the fact that the runway was too short (or so it seemed) and that heavy fighting was still going on. Low on fuel, he chose to land on Iwo rather than ditch in the ocean. *DINAH MIGHT* touched down, and seemed certain to career off the end of the runway. However, its crew managed to come to a halt just a few feet short of disaster. As Malo revved up and turned the bomber around, Japanese troops opened fire on him with mortars and artillery.

The pilot and his crew hastily hand-filled the tanks with 2000 US gallons of fuel and then took off again. Sadly, Lt Malo was killed in action just six weeks later. His was the first of over 2400 emergency landings to be made on Iwo during the bombardment of Japan.

Growing constantly as new bomb squadrons joined the force, Twentieth Air Force and XXI Bomber Command attacked Iwo Jima, Truk, Nagoya and Tokyo (twice) in February 1945, all with few changes in tactics. The largest mission yet came on the 25th, when 229 Superfortresses launched for the Japanese capital and 172 dropped on the primary. Another Tokyo mission was flown on 4 March, but by then the 314th BW's commander,

Left and below
Battle-damaged Superfortresses are seen awaiting repair on Iwo Jima in the spring of 1945. The island of coral and slag seized from the Japanese in a pitched battle in February 1945, 'Bloody Iwo' gave the Americans a reserve emergency airstrip close to Japan where a B-29 crew could seek safety if unable to make it back to Saipan or Tinian. (*AAF*)

Gen Thomas S Power, had discussed numerous tactical changes with LeMay.

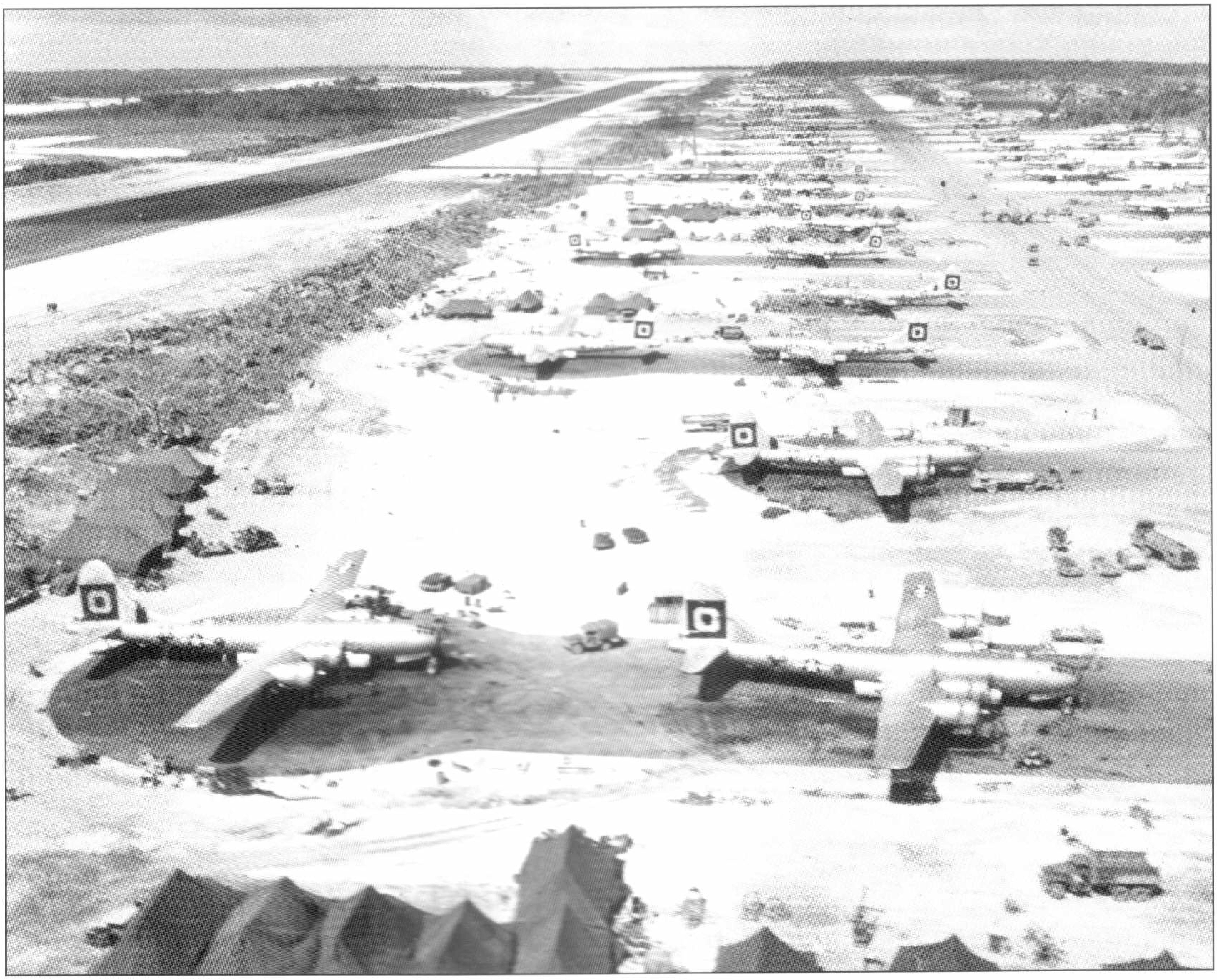
Power noted that B-29s would need less fuel and could carry more incendiary bombs (which were back in vogue under LeMay) if they attacked from lower altitude. It was obvious to everyone that while Japanese defences at lower level might be more formidable, crews would be spared the jetstream winds that continued to hamper their efforts to bomb accurately.

On the night of 9–10 March, US strategy in the Pacific War took a new turn when LeMay launched a different kind of bombing mission against Tokyo. He made the difficult decision to attack at low level, at night, with all guns removed from the B-29s except for those in the tail. LeMay's bombers struck Japan's capital not with explosives but with fire.

The idea of using firebombs against Japan had been pondered by the US military since the earliest days of the war. Some in Washington wanted to focus on Japanese industry, while others wanted to attack urban centres. Ultimately, experts decided on what historian E Bartlett Kerr called 'a dual strategy for attacking Japan – bomb the factories, then burn the cities'.

LeMay's change in tactics rankled some. B-29 crews liked the safety of height and the protection of guns. Morale had not been good in any event because of the mixed results the bombing campaign was producing, and many embarked on this nocturnal mission with serious misgivings.

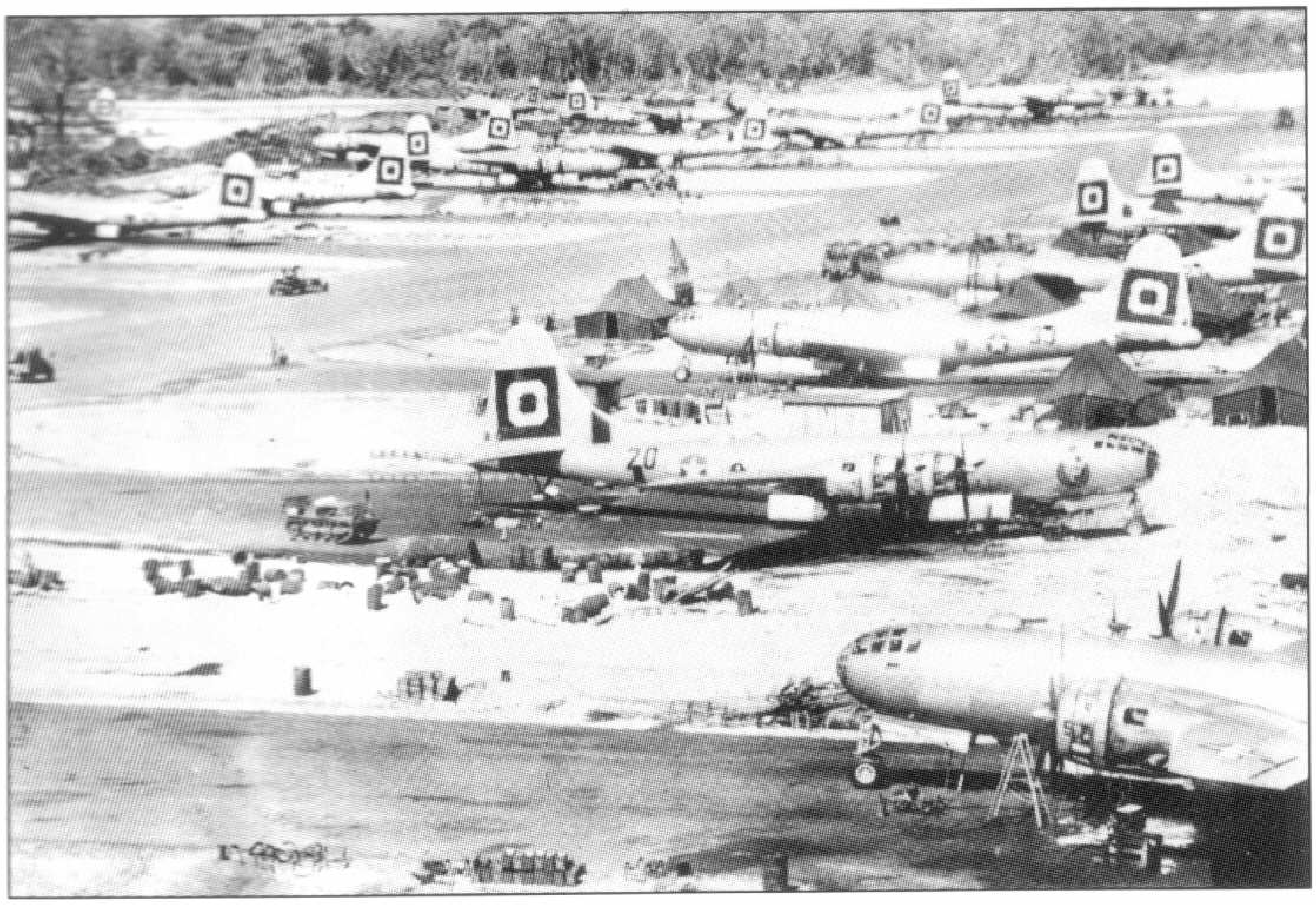
That night, LeMay launched 346 Superfortresses from ten bomb groups belonging to all three bomb wings (73rd, 313th and 314th BW) then available to him. Each aeroplane had an 11-man crew. Because he had been briefed on a future secret weapon still under development in the



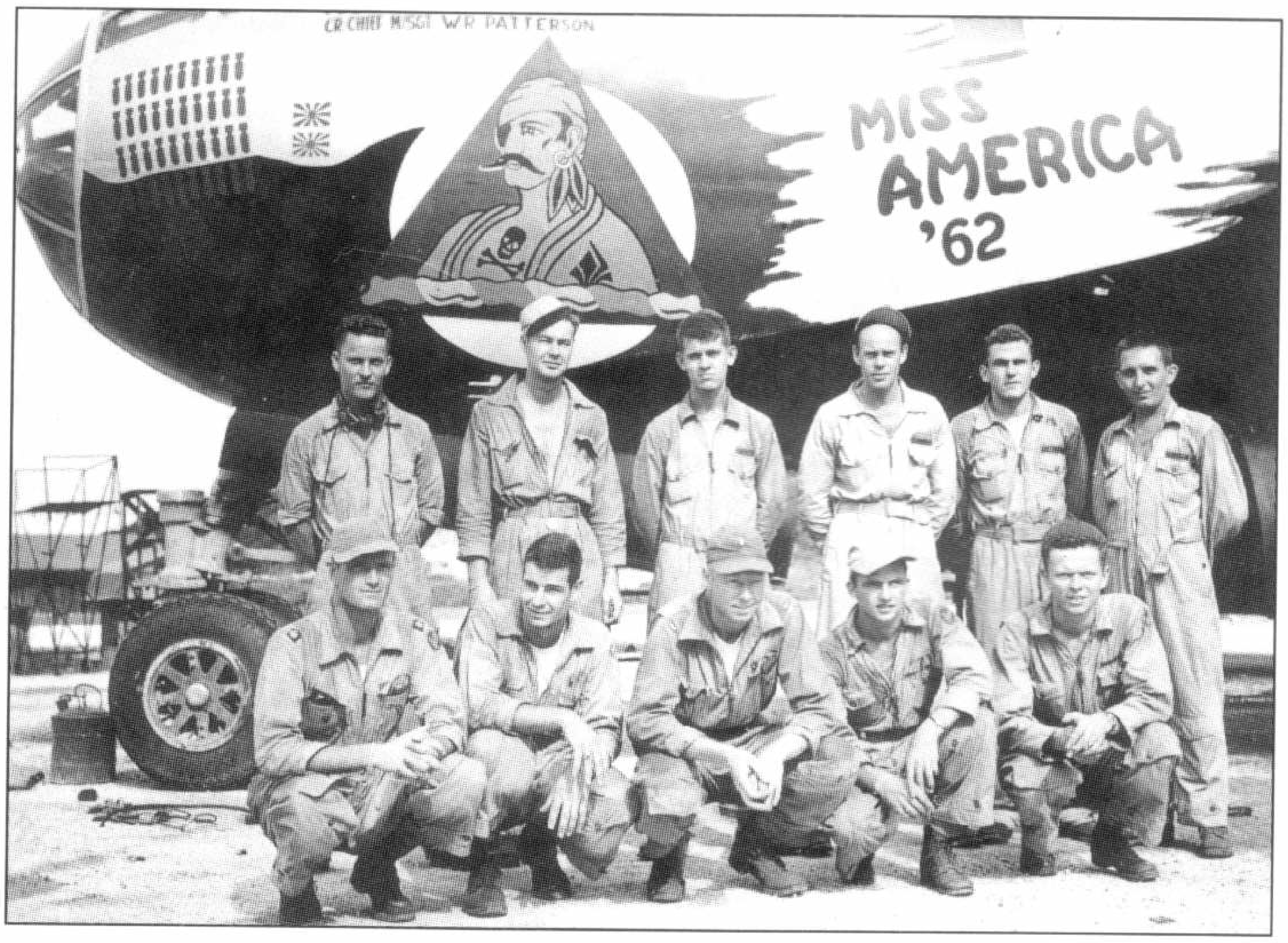
Above and right
This impressive view of Guam's North Field is dominated by B-29s of the 29th BG, which was part of the 314th BW. As is readily apparent, the group identifier was an 'O' enclosed in a black square on the tail. When viewed through an eyepiece, the photograph above reveals B-29s marked with an 'M' enclosed in a black square on the tail towards the end of the row. These aircraft belonged to the 19th BG. The Superfortresses of the 314th BW were remarkably devoid of individual markings. (*AAF*)

United States, LeMay could not fly the mission and run the risk of capture. It was led by Power. Of the bombers that took off, 279 actually dropped bombs on Tokyo, led by special pathfinder crews who marked a central aiming point.

Capt George A Simeral was pilot of *SNATCH BLATCH*, the bomber carrying mission commander Power. As the raid progressed, Simeral circled. He and Power observed a light and colour show created by



incendiaries, fires, searchlights and flak. Power climbed down into the nose of the B-29, unfolded a map and began sketching the bombing results with the naked eye.


CR CHIEF M/SGT W.R. PATTERSON
MISS AMERICA '62

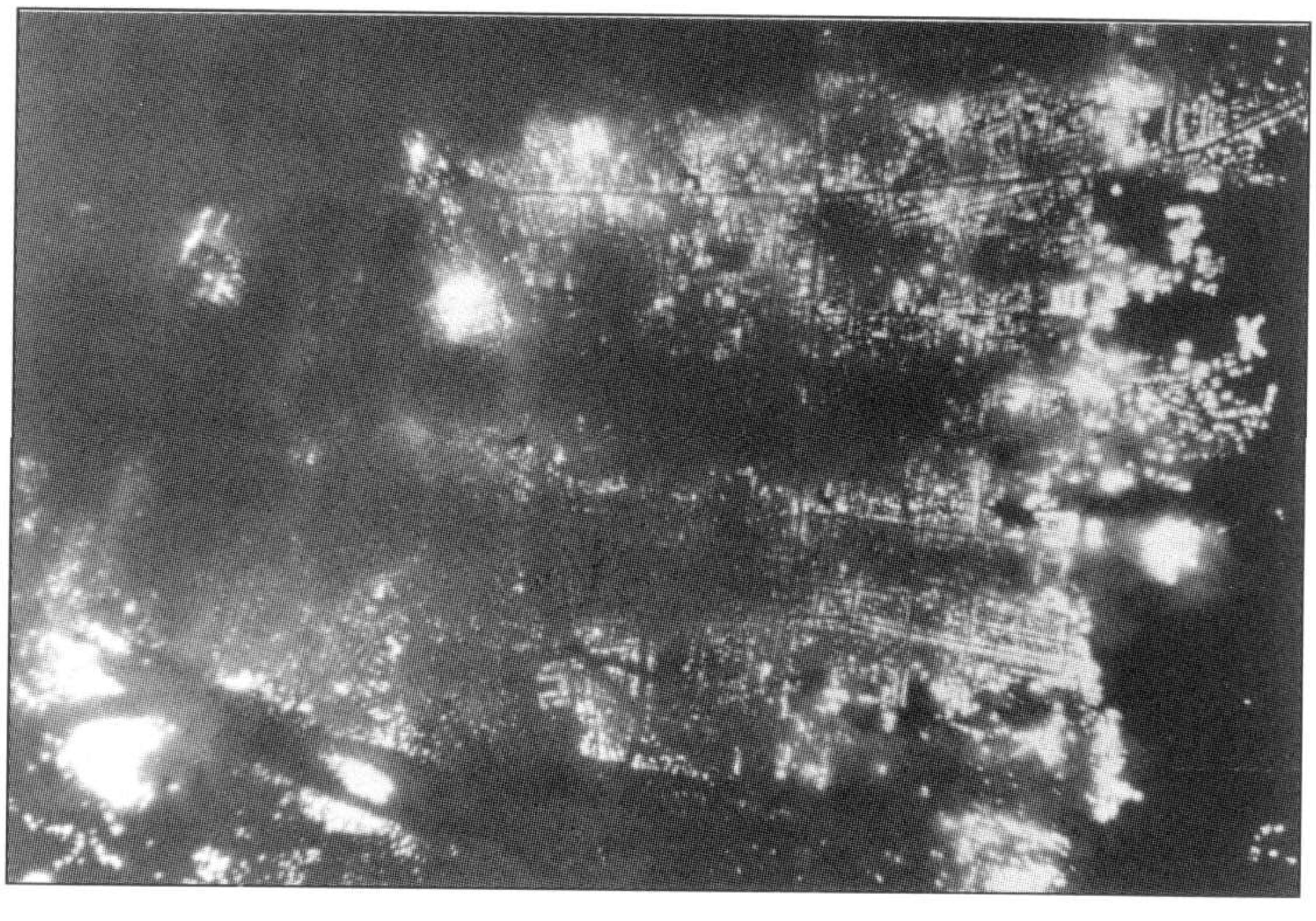
They all had a picture like this. This is the crew of Martin-built B-29-25-MO 42-65281 *MISS AMERICA '62* of the 24th BS/6th BG/313rd BW at North Field, Tinian. The 6th BG used the likeness of the pirate Jean Lafitte inside a triangle, harkening back to the group's long service in the Panama Canal. At this juncture in the war, pilot 1Lt Bruce Alger, after whose infant daughter the bomber has been named, has been replaced by Maj Jim Sapp (first row, left). Beside Sapp is co-pilot 1Lt Peter Summer. *MISS AMERICA '62* survived the war and is presently on display in her original markings at the Travis Air Force Heritage Center and Air Park, situated within the environs of Travis Air Force Base, in California. (*Peter Summer*)

Radio operator S/Sgt Henry 'Red' Erwin, using an extension line to his intercom set, climbed up into the navigator's astrodome and looked out in awe as Simeral continued to circle, oblivious to the Japanese defences. Erwin recalled later that the night was clear and crisp before the smoke began building up. Six weeks later, under circumstances no one could predict, 'Red' Erwin would duly become the most famous enlisted crewmember of the B-29 force.

For two hours, the roar of Superfortresses filled the night sky over the Japanese capital. The raid levelled 16 square miles of the city – 84,000 people died and a million were made homeless. John Pimlott of Britain's Royal Military Academy at Sandhurst called the raid a 'bludgeon'. US literature released a few months later (and with knowledge of the subsequent atomic bombings of Hiroshima and Nagasaki) claimed that the Tokyo incendiary raid ignited the hottest fires ever to burn on the Earth.

As LeMay had hoped, the Japanese did not have an effective force of nightfighters. Anti-aircraft fire damaged 42 bombers and was responsible for the total loss of 14 B-29s. It seemed a small price. The Tokyo raid was regarded as an enormous success, and in the weeks that followed, several other firebomb missions were mixed in with raids that used conventional weapons. More than 500 B-29s flew on one subsequent mission.

XXI Bomber Command conducted five more firebomb raids in March, and levelled 32 square miles in four Japanese cities. For the first time in this long aerial campaign, pilots and crews started to think that they were accomplishing something.



The firebombing of a Japanese city in 1945. Contrary to popular myth, the use of incendiary bombs was not the idea of XXI Bomber Command boss Maj Gen Curtis E LeMay. In fact, US officers studied firebombing before the first B-29 ever flew. The mixture of thermite and incendiary weapons employed against Japanese cities never replaced the use of explosive bombs, which were dropped on most missions, and the strikes on urban centres did not alter the basic strategy of attacking targets of military value. (*Chester Marshall*)

The final wing to join Twentieth Air Force and XXI Bomber Command (between 31 March and 16 July, the terms were, in effect, synonymous) was the 315th BW, commanded by Brig Gen Frank A Armstrong Jr. On 27 May, the first bombers of the wing's 16th BG touched down at Northwest Field, on Guam. Soon, the 331st, 501st and 502nd BGs would follow. 315th BW bombers received their distinctive markings soon after arrival, the wing symbol being a large outlined black diamond with a black group letter (B, L, Y or H) within it.

The Superfortresses of the 315th BW were different in important ways from those of the four other bomb wings in XXI Bomber Command. They were equipped with AN/APQ-7 Eagle radar, a new system far more capable than the AN/APQ-13 system fitted in most other B-29s. The unit dangled distinctly beneath the fuselage of the bomber, in effect resembling a tiny additional wing. Although it provided a higher state of resolution than its predecessor, the Eagle also required a longer bomb run of up to 70 miles (120 km) from initial point to drop, meaning that the newly arrived wing would be limited to flying nocturnal missions, or to bad-weather raids when Japanese defences would be degraded.

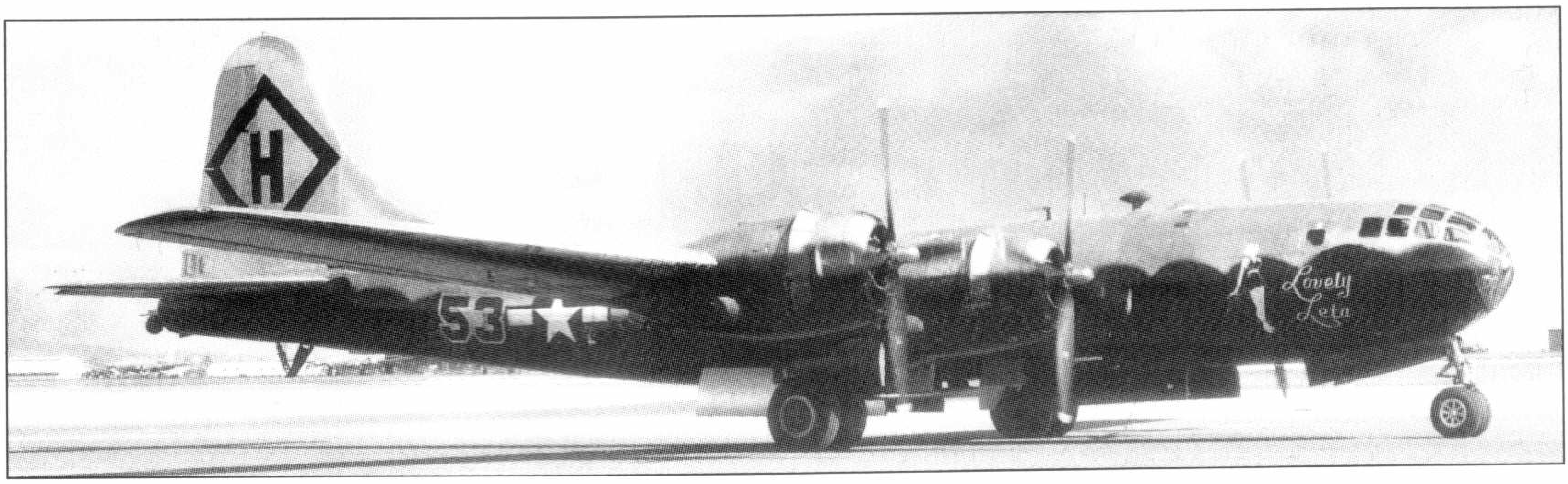
Ultimately, the 315th acquired a single mission to be performed at night – namely to wipe out the Japanese petroleum industry. The members of the wing quickly found themselves dubbed 'The Gasoline Alley Boys', referring to their role by lifting the title of the popular 'Skeezix Wallet' cartoon strip by Frank O King. In the weeks ahead they were going to deal a mighty blow to Japan's refineries and storage and distribution centres.

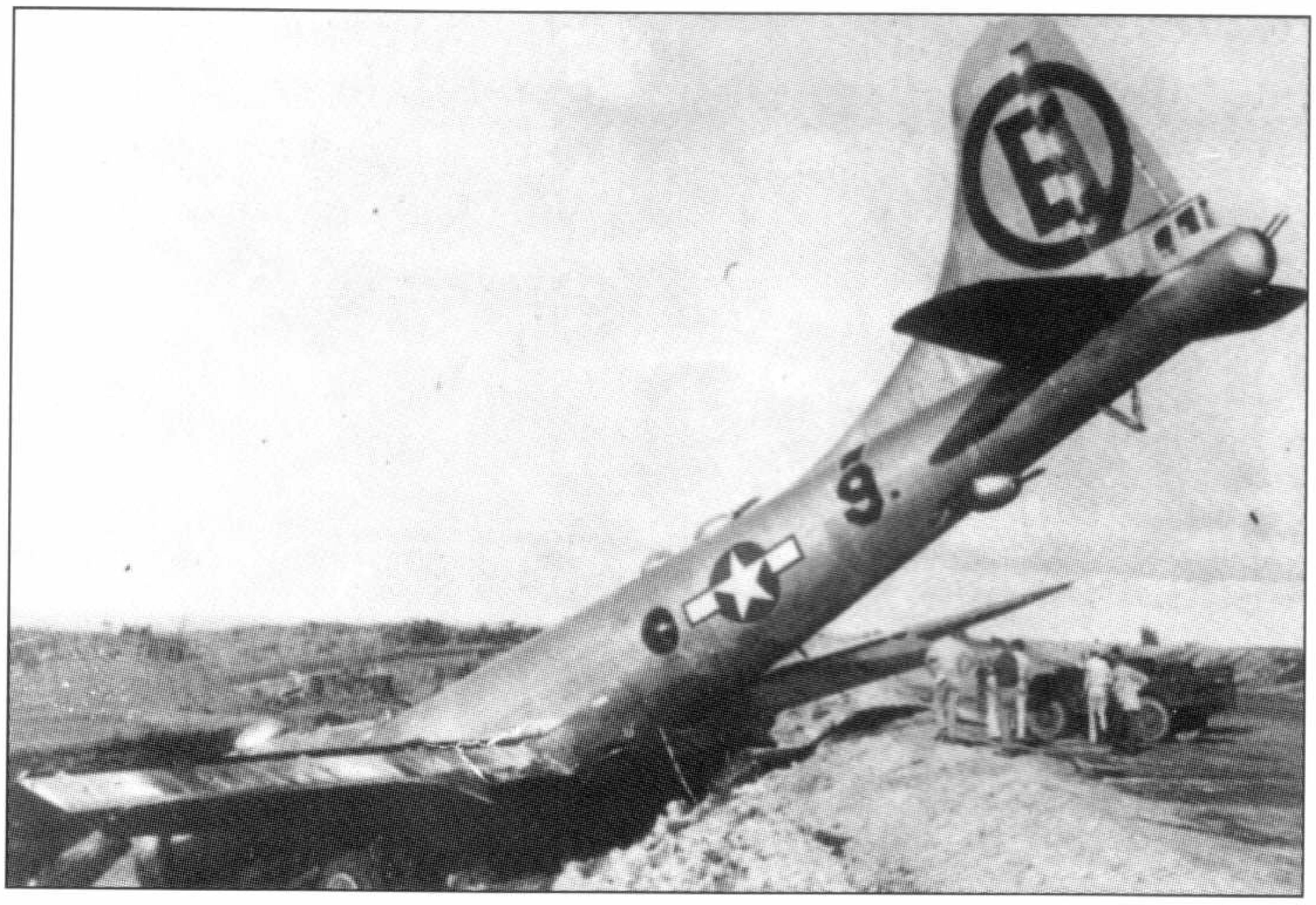
And thanks to Gen LeMay's apparent interest in low-level operations, the B-29s of the 315th BW were stripped of all armament except for the tail gun position, which boasted three 0.50-cal (12.7-mm) guns rather than two 'fifties' and a 20 mm cannon. At locations where guns appeared on other Superfortresses, these aircraft had the glass area filled in with metal. They were believed to be infinitesimally faster than other B-29s.

CLOSER TO JAPAN

The war's last great battle began with the invasion of Okinawa on 1 April. By now, Japan's defences included a growing force of pilots called *kamikaze*, named for a divine wind that had destroyed another foe's naval armada and saved the homeland in the distant past. The fleet gathered around Okinawa – and the Allied airpower swarming overhead – found itself challenged by Japanese pilots who were willing to commit suicide to defend their cause.

Built by Bell in Atlanta, B-29B *Lovely Leta* of the 502nd BG is seen taxying out at Northwest Field, on Guam, with the scanner for its all-important AN/APQ-13 Eagle radar just visible between its main undercarriage legs. (*via Frank MacSorley*)





To support the landings on that hard-fought island, the 73rd and 314th BWs attacked airfields on Japan's westernmost island of Kyushu in late March and early April. The 313th BW, meanwhile, took on a new chore when it began dropping aerial mines into the Straits of Shimonoseki, between Kyushu and Honshu, in an effort to tie up what remained of Japanese shipping and naval forces. In what became known as Operation *Starvation*, 181 B-29s dropped 1830 mines. Four aircraft were lost on the first two missions alone.

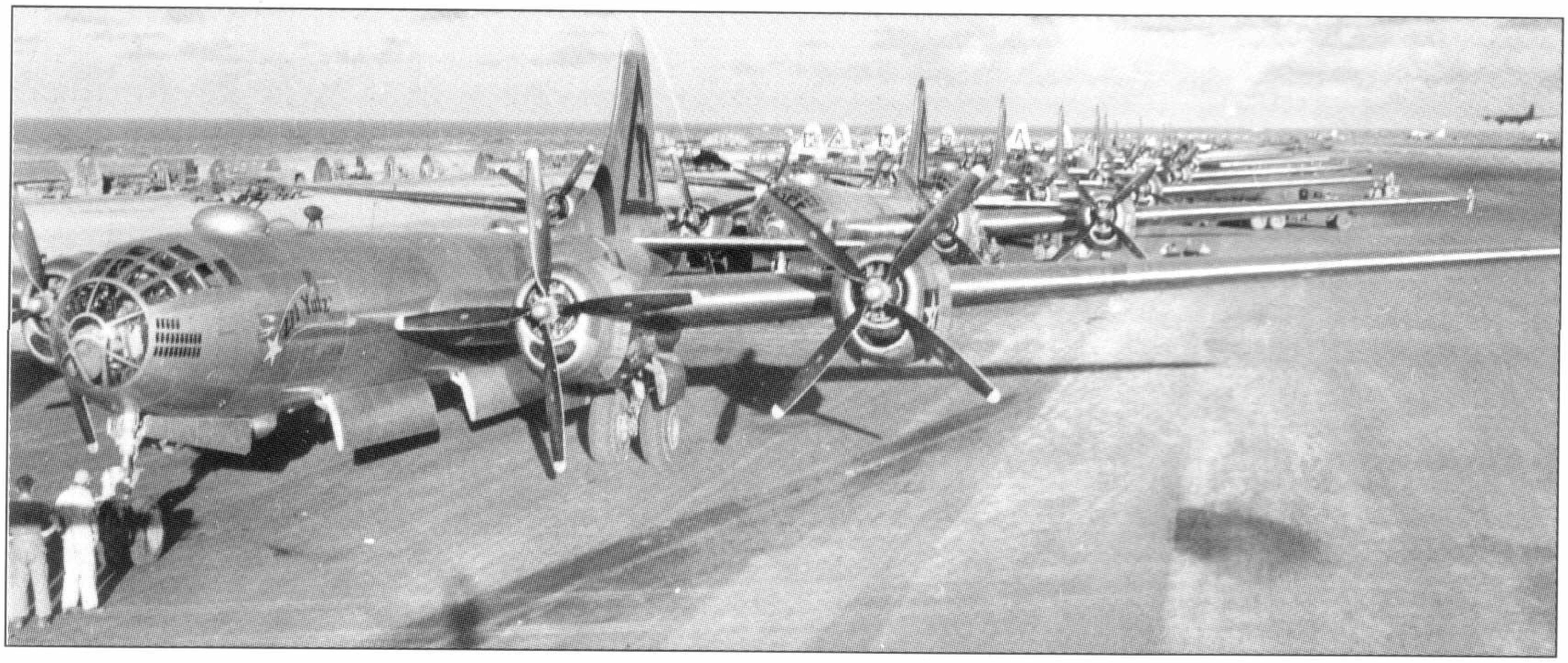
All three of XXI Bomber Command's Superfortress groups made a return visit to Tokyo on the night of 3–4 April. No fewer than 242 bombers took off, of which 152 eventually struck their primary. Again, LeMay seemed blessed. Only one B-29 failed to return from the Japanese capital.

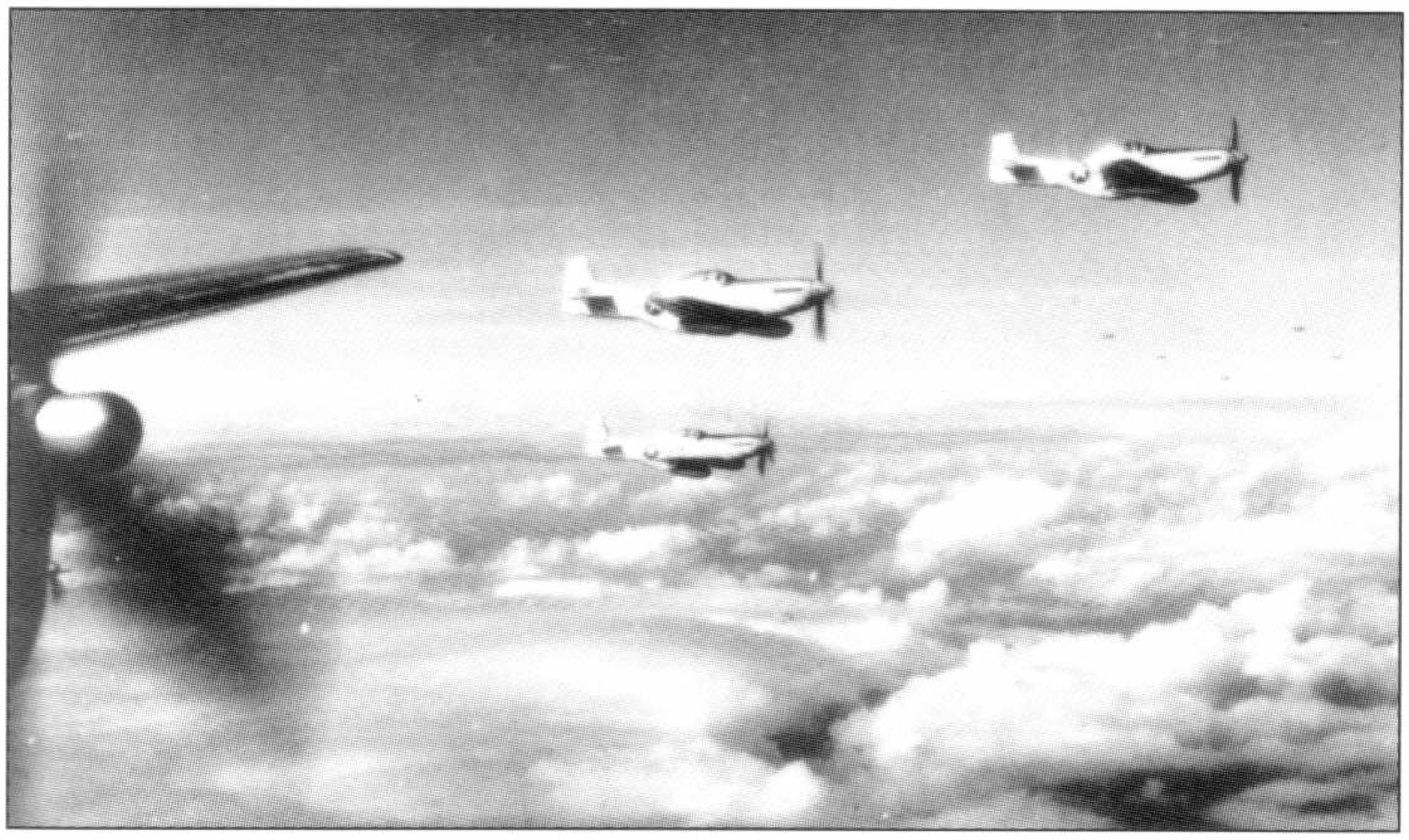
Results were also good on a subsequent visit to Tokyo on 7 April – the first time a bomber formation was escorted by fighters. Altogether, B-29s flew 82 missions in April, ranging over Japan as if they owned the skies, on occasion encountering furious resistance but producing good bombing results. Especially effective was yet another firebomb mission to Tokyo on the night of 13 April. As we shall see momentarily, this mission had a consequence that the Superfortress crews could have hardly foreseen.

The overall effort by the Twentieth Air Force, with its XXI Bomber Command comprising the 73rd, 313th and 314th BWs (and soon to be joined by the 315th), had produced a stunning transformation. At the beginning of 1945, Superfortress crews were still struggling mightily to produce results on each mission, which sometimes involved only a couple of dozen bombers. By the end of April, Superfortresses were laying waste to Japan's military installations, industry and cities. Still, soldiers and

A sight repeated all too often. Some sense of the size of the B-29, and the length of its 99-ft (30.1-m) fuselage, can be gleaned from the members of the 504th BG who have pulled up behind this defunct bomber in a 4x4 weapons carrier vehicle. Losses of Superfortresses, which were unacceptably high in the first days of the campaign against Japan, eventually began to decline as a percentage of the total force, but always remained high in absolute numbers. This Superfortress, photographed at North Field, on Tinian, was one of many that never flew again. (*via Norman Taylor*)

A seemingly endless row of XXI Bomber Command B-29s sit on a taxyway on Iwo Jima. In the foreground is *"L'il Yutz"* of the 498th BG/73rd BW. (*AAF*)





Fighter squadrons were moved to the island of Iwo Jima in the spring of 1945 so as to escort B-29s to targets in Japan. These drop tank toting P-51D Mustangs from an unidentified fighter group were photographed by grateful B-29 pilot Chester Marshall of the 878th BS/ 499th BG. (*Chester Marshall*)

BATAAN
AVENGER
D SMOKING WITHIN 100 FT.

A grim-faced Gen Jonathan Wainwright (left) poses with an unknown aide alongside B-29-BW 44-69753 in the weeks immediately after VJ-Day. Wainwright had a special affiliation with the nickname of this veteran machine, for it was he who had the task of surrendering Bataan to the Japanese in 1942. Money to pay for the purchase of this B-29 was raised by workers at Boeing's Wichita, Kansas, plant, as well as members of the 101st Airborne Division (hence the bald eagle and bomb), then undergoing training at nearby Fort Riley. Pilot Chester Marshall was one of the pilots in a mixed crew of 14 that flew this B-29 back to the US for overhaul after all 14 men had completed their 30-mission combat tours in June 1945.

marines alike were wondering what they would find when they went in on the ground.

PRESIDENT TRUMAN

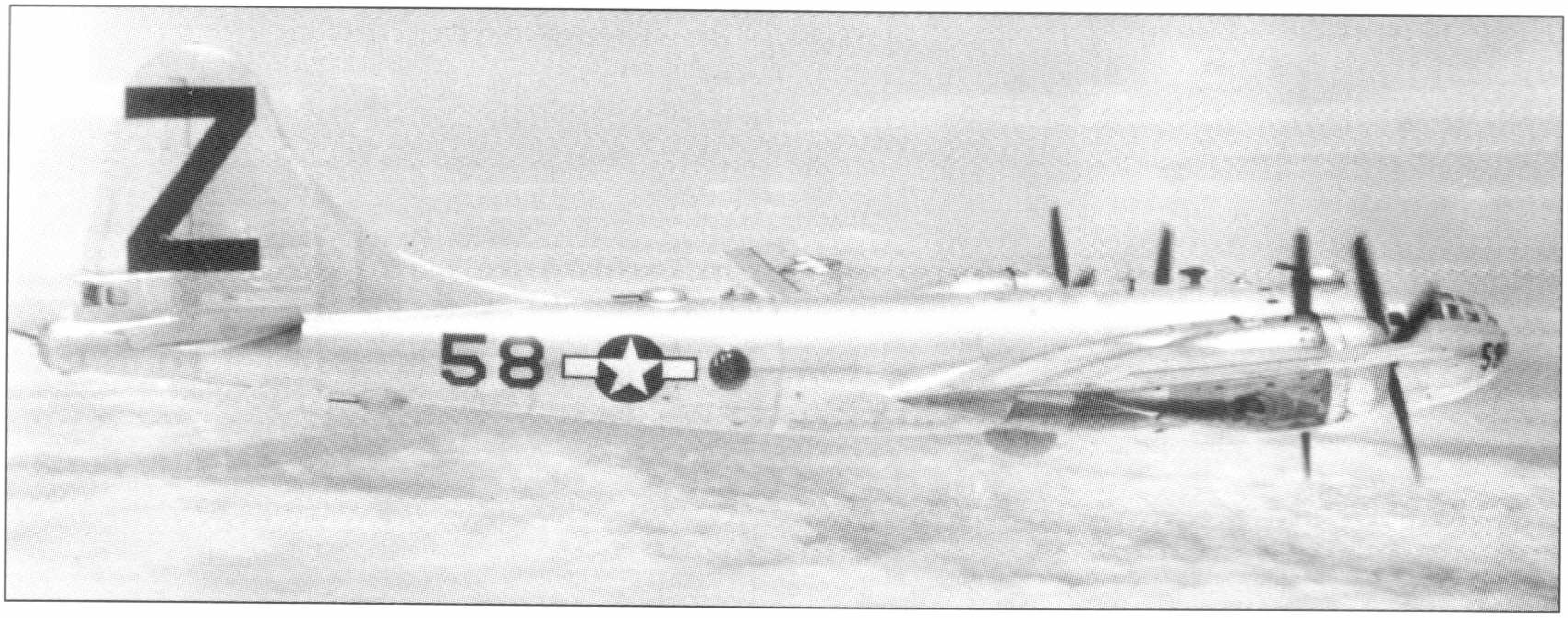
When President Franklin D Roosevelt died suddenly on 12 April 1945, he had been in office for so long (since 1933) that most living Americans could remember no other president. Harry S Truman, who became chief executive, was almost unknown to Americans and to all abroad.

Incredibly, Truman had no clue that American scientists in New Mexico, in a programme managed by Maj Gen Leslie Groves, were developing a secret weapon. As early as his first day in the job, the new President realised that he would soon have to decide whether to invade Japan or whether, instead, to achieve victory by isolating and starving out the besieged island nation.

But it was not until 25 April – almost two weeks into Truman's tenure – that Secretary of War Henry L Stimson and Groves briefed the President on the Manhattan Project. For the first time, he heard about the atomic bomb.

In later years, revisionist historians would portray Truman agonising over whether to use the bomb. In fact, both Roosevelt and Truman routinely expected to employ the weapon. Apart from a small cabal of scientists in Chicago, no one seriously contemplated not using it. The previous December, the AAF had stood up a unit called the 509th Composite Group (CG), headed by Col Paul W Tibbets. More like a squadron than a group, and handed a special mission that was not explained to its members, the 509th was working up in the US and preparing to go to Tinian.

AAF leaders had selected the Glenn L Martin assembly line to produce a batch of Superfortress bombers codenamed *Silverplate* aircraft. Martin modified these special B-29s by deleting all gun turrets except for the tail



War in the air was often bloody and ugly, but the B-29 could have a look of grace and majesty at moments. Take this photograph of B-29-80-BW 44-70113 for example, marked by the 500th BG as 'Z58', and seen heading for the Japanese home islands on a mission from Isely Field, Saipan, in 1945. (*via Norman Taylor*)

position, removing armour plate, installing Curtiss electric propellers and configuring the bomb-bay to accommodate either the 'Fat Man' or 'Little Boy' versions of the atomic bomb. The AAF assigned 15 *Silverplate* ships to Tibbets' 509th CG. These aircraft had a distinct bomb-bay shape, but except for Tibbets, almost no one in the unit knew why.

'RED' ERWIN

On the date of President Roosevelt's death (although it was, in fact, a day earlier on the far side of the international dateline), Superfortresses struck Koriyama. On this occasion, Capt George Simeral and his crew were flying *CITY OF LOS ANGELES*. Approaching the initial point, S/Sgt Henry 'Red' Erwin prepared to drop parachute flares and a phosphorus bomb to mark the assembly point for other B-29s. The phosphorus smoke bomb was a 20-lb (9-kg) canister with a six-second delayed action fuse to enable it to fall some distance from the bomber before igniting.

Suddenly, the B-29 came under attack from fighters, one crewman later stating that they were 'like yellowjackets swarming out of a disturbed nest'.

Erwin launched the phosphorus bomb, but the device clattered down the exit pipe, balked and failed to fall through its release gate at the bottom. The bomb shuddered, bounced back at Erwin and exploded. Searing flame shot back into his face. Burning at 1300°F, threatening to blow the B-29 to bits, the loose bomb bounced around the inside of the fuselage. Another crewman tried to catch it and smother it with parachute packs, but without success.

'Red' Erwin then stepped up and grabbed himself a 'handful of hell'. Smoke now filled the cabin, and Erwin clutched the burning bomb, his eyes a mass of blisters, others choking and vomiting around him. The B-29 went out of control, Simeral fighting in vain to prevent the bomber from hurtling earthward. Erwin struggled toward the flight deck.

Co-pilot 1Lt Roy Stables peered through the smoke in disbelief as a burning human being approached him shouting, 'Open the window! Open the window!' The heat could be felt from one end of the aircraft to the other, and it seemed certain the bomb would turn the B-29 into a blazing torch at any instant. Simeral screamed, 'Get it out the window!'

Somehow co-pilot Stables overcame his shock at seeing the flaming soldier doing what no human being should be capable of accomplishing, and managed to open the window. 'Excuse me sir', 'Red' Erwin said through his pain, and then launched the flaming canister into the wind, before collapsing to the floor in flames. Only 300 ft (100 m) from the ground, Capt Simeral pulled the *CITY OF LOS ANGELES* out of its dive to head for Iwo Jima, which was the nearest landing site affording medical aid.

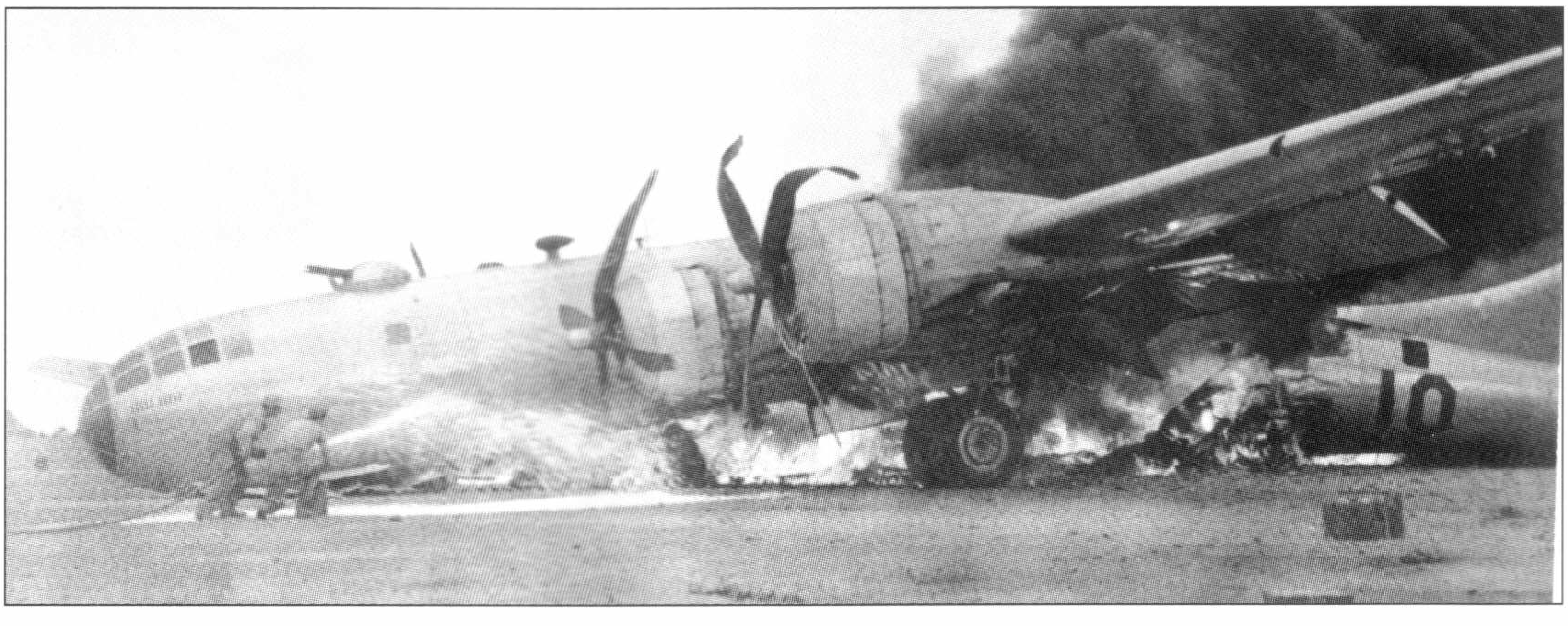
The crew turned fire extinguishers on the prostrate, burning body of 'Red' Erwin. Stables administered morphine to dull the pain. Through it all, the trip back and days of surgery that followed, Erwin remained conscious.

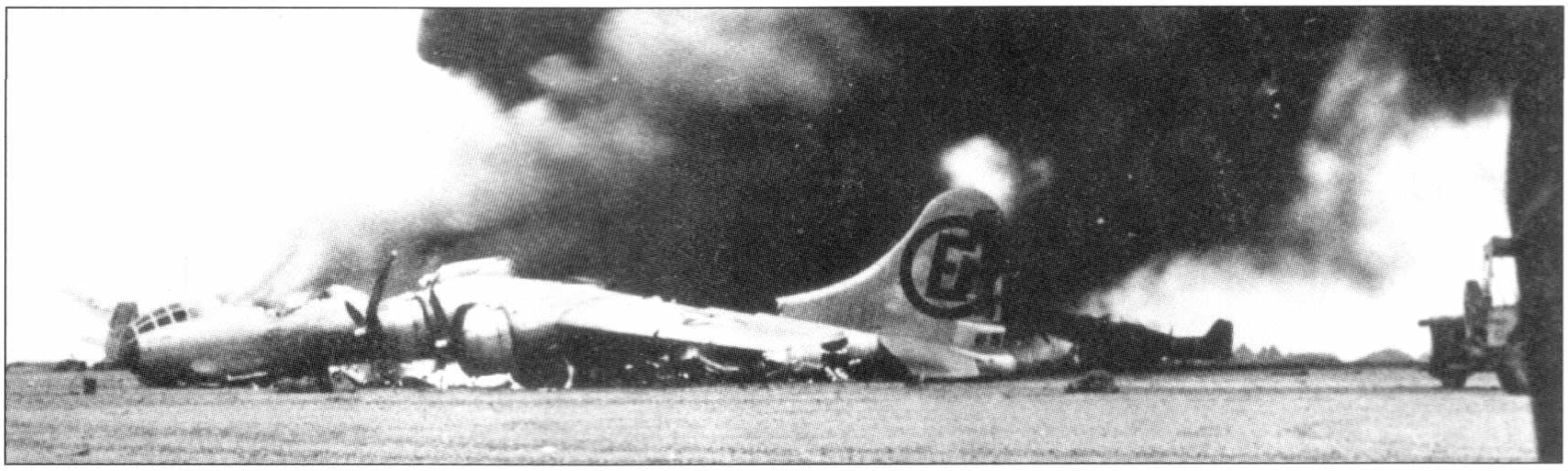
The doctors gave it their best shot – whole blood transfusions, internal surgery, antibiotics to fight infection. For hours they laboured to remove embedded white phosphorus from his eyes. The chemical spontaneously combusts when exposed to oxygen, and as each fleck of incendiary was removed it would burst into flames, torturing the airman once again.

Through it all, Erwin said that there was an angel by his side saying, 'Go, go, go. You can make it'. Everyone expected him to succumb to the pain, if not the wounds. That night the officers of Erwin's unit prepared a recommendation for the Medal of Honor. At 0500 hrs the next morning they awakened LeMay at his headquarters in Guam. The general took a personal interest in Erwin, sending his recommendation to Washington, DC, and arranging to fly 'Red's' brother, who was with a Marine Corps unit in the Pacific, to his deathbed.

The AAF flew Erwin from Iwo to Guam where he could receive more complete medical attention. Eager to present him with his nation's highest award before he died, LeMay canvassed the Pacific region and learned that there was only one example of the Medal of Honor anywhere

Below and bottom
A B-29 of the 504th BG/313th BW burns on Iwo Jima after diverting to the island with battle damage in 1945 – the exact date of this incident is unrecorded. The bomber boasts 11 mission markers below the cockpit, so perhaps this inferno marks the fiery ending of its 12th, and obviously last, operation.
(*via Norman Taylor*)





– in a glass display case in Hawaii. An aircraft and men were hastily despatched to collect. No one could find the key to the display case, so the men smashed it, grabbed the medal, and rushed back to Guam.

There, on 19 April, just one week after his B-29 had nearly burned up from the inside, Erwin was rolled out in a stretcher. He was wrapped entirely in white, with slits for his eyes and mouth. With his B-29 crew and Maj Gen Willis Hale watching, LeMay handed Erwin the medal – possibly the only time an American was awarded a medal snatched from a showcase – and told him, 'Your effort to save the lives of your fellow airmen is the most extraordinary kind of heroism I know'. Through his bandages Erwin replied, simply, 'Thank you, sir'.

LeMay had been certain the award would become posthumous, but Erwin surprised everyone by refusing to die. He was just 23 years old and would, in fact, enjoy a full life extending well into the 21st century. But in the days following that B-29 mission, he suffered while medics administered transfusions, skin grafts, internal surgery and injection after injection. He was still receiving medical treatment three years and 43 operations later.

Erwin became the only Superfortress crewmember to be awarded the Medal of Honor for action aboard a B-29 – one of LeMay's B-29 pilots, Michael Novosel, would later receive the award for action as a UH-1 Huey helicopter pilot in Vietnam.

OLYMPIC CORONET

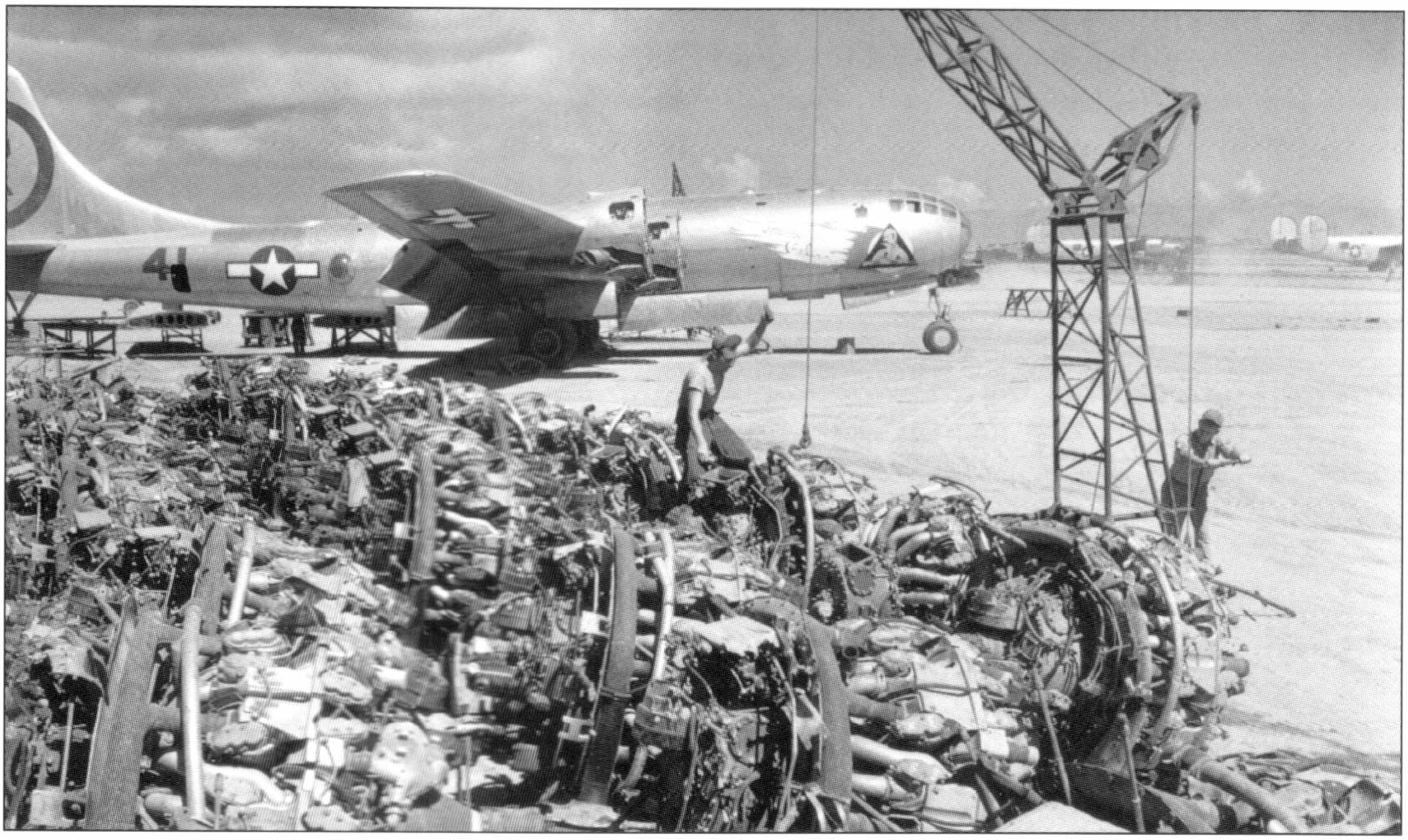
In May 1945 – a month when a remarkable 54 Superfortress missions were mounted – Allied commander Gen Douglas MacArthur tasked Lt Gen Walter Krueger, commanding the US Sixth Army, to begin plans for the invasion of Japan. The brass envisioned a two-step assault, code-named Operation *Downfall*.

The first phase called for the amphibious landings on Kyushu by Krueger's veteran army on 1 November 1945. If, as expected, Japan continued to resist during the Kyushu campaign and into the winter, the second step, Operation *Coronet*, was projected for March 1946, with an amphibious assault upon the beaches of the broad, sweeping Kanto Plain before Tokyo. In combination, *Olympic* and *Coronet* would be carried out by a naval, air and land force greater than any other ever before assembled.

A total force of five million men, all American except for the inclusion of three British Commonwealth infantry divisions, a contingent of air support, and the British Pacific Fleet, would be engaged in the land campaigns and on the waters around the Japanese homeland.

The invasion of Japan was still half a year away, at least, as the B-29 force stepped up operations in May and June 1945. A 14 May mission to Nagoya put an extraordinary 524 Superfortresses into the air, of which 472 bombed the primary. Two days later in a return visit, 457 bombers dropped on Nagoya. Tokyo was the target on 25 May, when 464 bombers struck, most bombing by radar. No fewer than 510 Superfortresses were launched against Yokohama four days later.

The newcomer 313th BW continued the aerial mining of Japan from March through to June. It was a tough, thankless job for Superfortress crews, carried out at night, with little recognition or feedback. By laying traps for any shipping that might enter Japanese waters, Superfortress

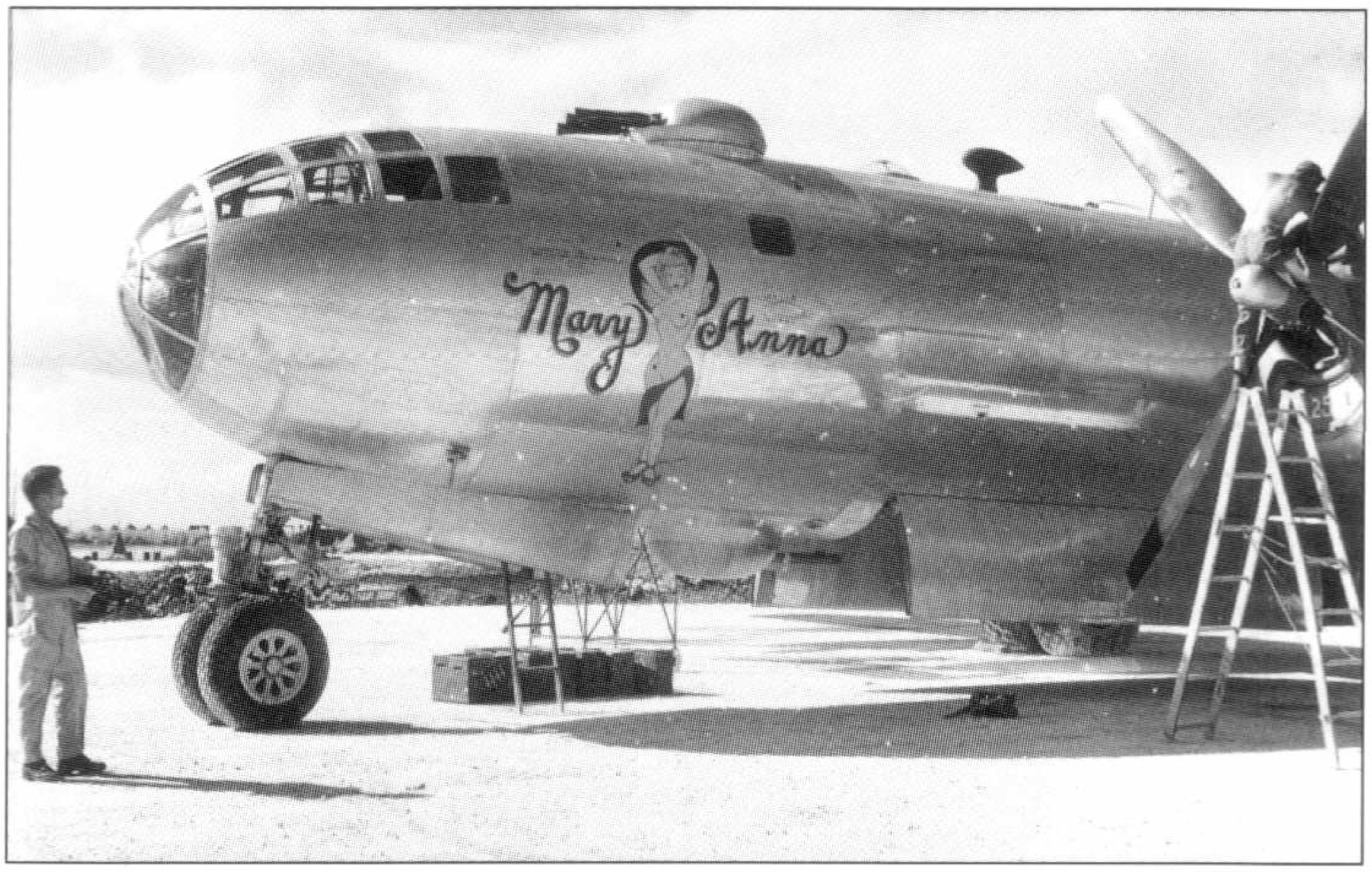


The end of the line for a B-29. Sat alongside rows of time-expired R-3350s, equally redundant B-29-BW 44-69839 *Forever Amber* of the 39th BS/6th BG basks in non-flying condition on the island of Iwo Jima in the summer of 1945. The bomber was slowly being used as a supply of spare parts for other B-29s making emergency landings on the island – and it had no shortage of customers. Readily visible on the bomber's nose is the 6th BG's likeness of the pirate Jean Lafitte inside a triangle, harkening back to the group's long service in the Panama Canal Zone in the 1920s and 1930s. *Forever Amber* was salvaged on Iwo Jima after a nocturnal firebombing mission to Kobe-Osaka on 5 June 1945. During its bomb run, radar-directed searchlights bracketed the B-29 and flak tore through its bomb-bay. The direct hit killed the radar operator, wounded two of the gunners, and blew an arm off the third. Although the radio operator attempted to save the latter individual with a direct transfusion from the pilot's arm, he later died. The B-29 never flew again. (via *David Ostrowski*)

crews were, in effect, carrying out an aerial blockade, attempting to prevent the import of food and raw materials into the besieged island nation.

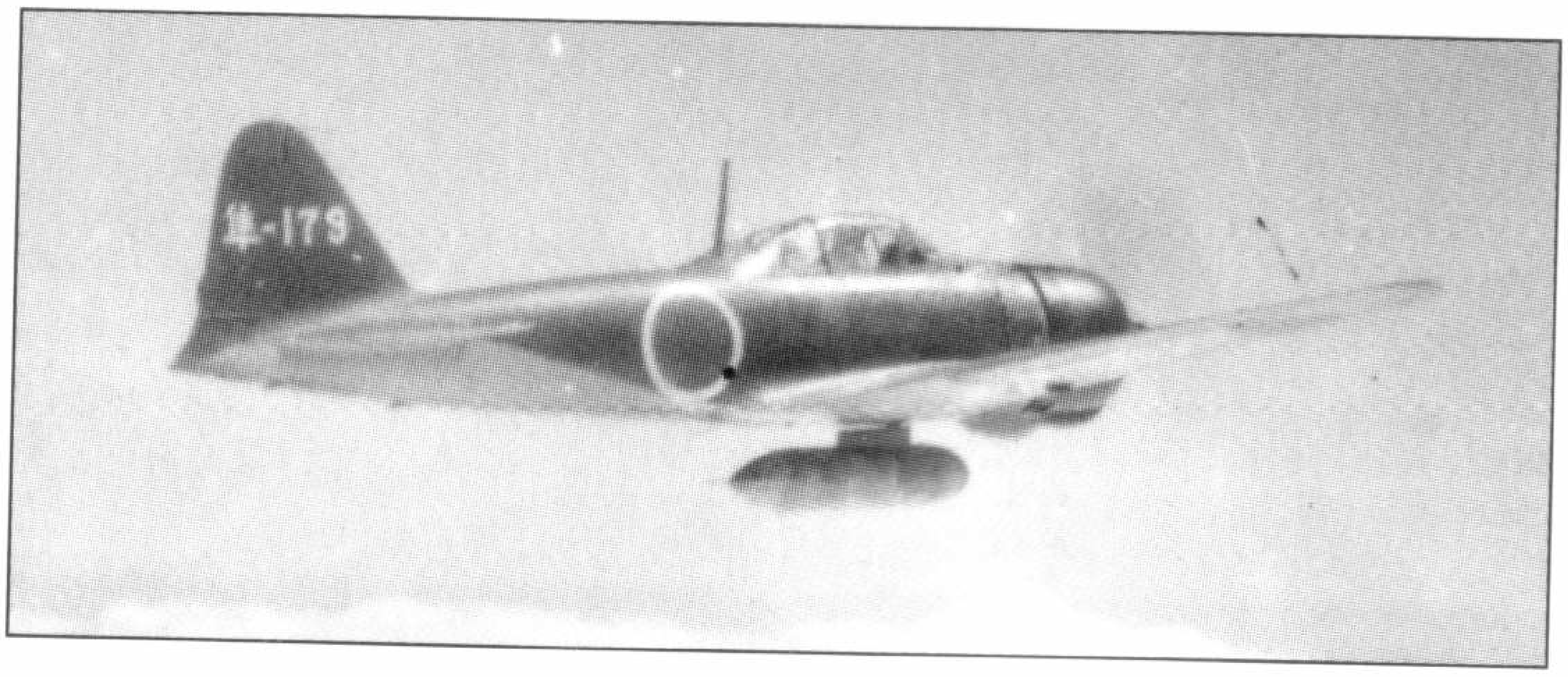
Japan was uniquely vulnerable to aerial mining, and Intelligence reported that the 1000-lb (454-kg) and 2000-lb (908-kg) aerial mines were extremely effective. Although the term was not in use then, these were 'smart' mines that could ignore some ships – minesweepers included – and detonate under others. By the time the campaign stretched into July, it had been through five distinct phases, and had seen tens of thousands of mines dropped that had in turn produced 'phenomenal results' in LeMay's words.

While the mining went on, the Twentieth Air Force – meaning XXI Bomber Command – continued to increase in size, and new Japanese cities fell beneath the wings of B-29s. On 1 June, 458 Superfortresses flew a daylight incendiary attack on the Kobe-Osaka complex. A second attack by 473 Superfortresses took place four days later.



***Mary Anna* was the scantily clad miss painted on the nose of this B-29, which belonged to the 505th BG/313th BW at North Field, Tinian. (*via Bill Hess*)**

The last time all four B-29 wings went against a target together until August was on 15 June, when bombers struck Kobe-Osaka again. On the night of 19–20 June, 123 Superfortresses of the 314th BW travelled to Shizuoka, arrived amid heavy anti-aircraft fire, and used firebombs to wipe away the industrial city centre.



A previously unpublished view of the foe, challenging the 504th BG on a bombing mission over Japan. Crewmembers rarely got such a close-up glimpse of a Japanese fighter, especially when it was not coming directly at them with guns blazing. It is unclear just how B-29 crewmember Steve Savko managed to snap this amazing shot of a belly tank-equipped Mitsubishi A6M5c Type 52, or 'Zeke 52', seemingly formating with a B-29 during a medium altitude bombing raid in 1945. (*Steve Savko*)

The fledgling 315th BW, with its Eagle radars, mounted its first mission on the night of 26–27 June, striking the Utsube oil refinery near Yokkachi. Going into July, the 'Gasoline Alley Boys' flew ever larger missions against petroleum targets. Striking the Kawasaki petroleum centre on the night of 12–13 July, the 315th BW lost its first two B-29s in combat. The wing hit Ube on 23–24 July. Kobe-Osaka also received more attention in July, as B-29 raids went after different industrial facilities in the port city complex.

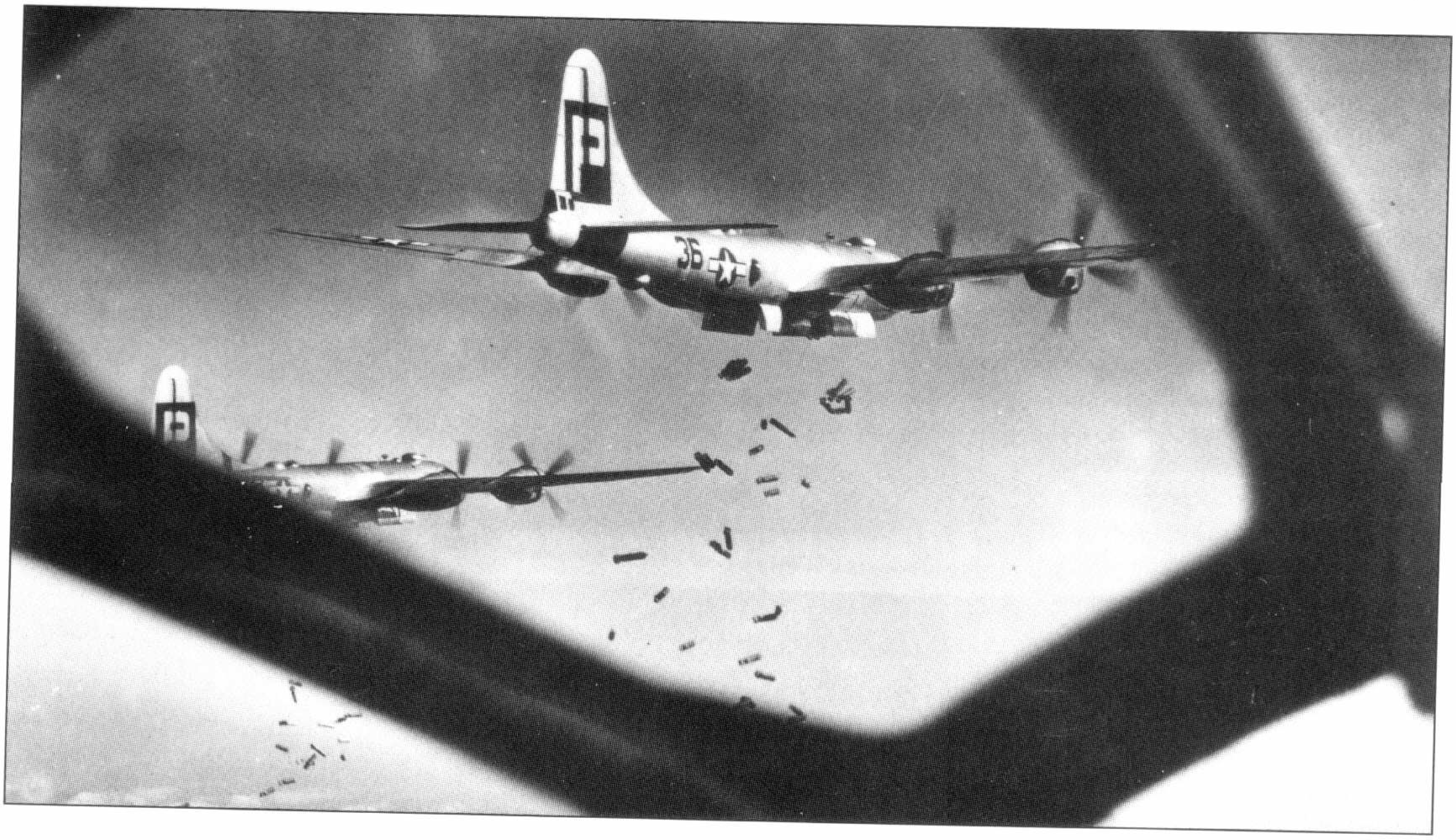
25 JULY MISSION

For this history, former Sgt Earl Leonard of crew Number Eight, 502nd BG/315th BW, provided a uniquely detailed first-person account of a mission from beginning to end:

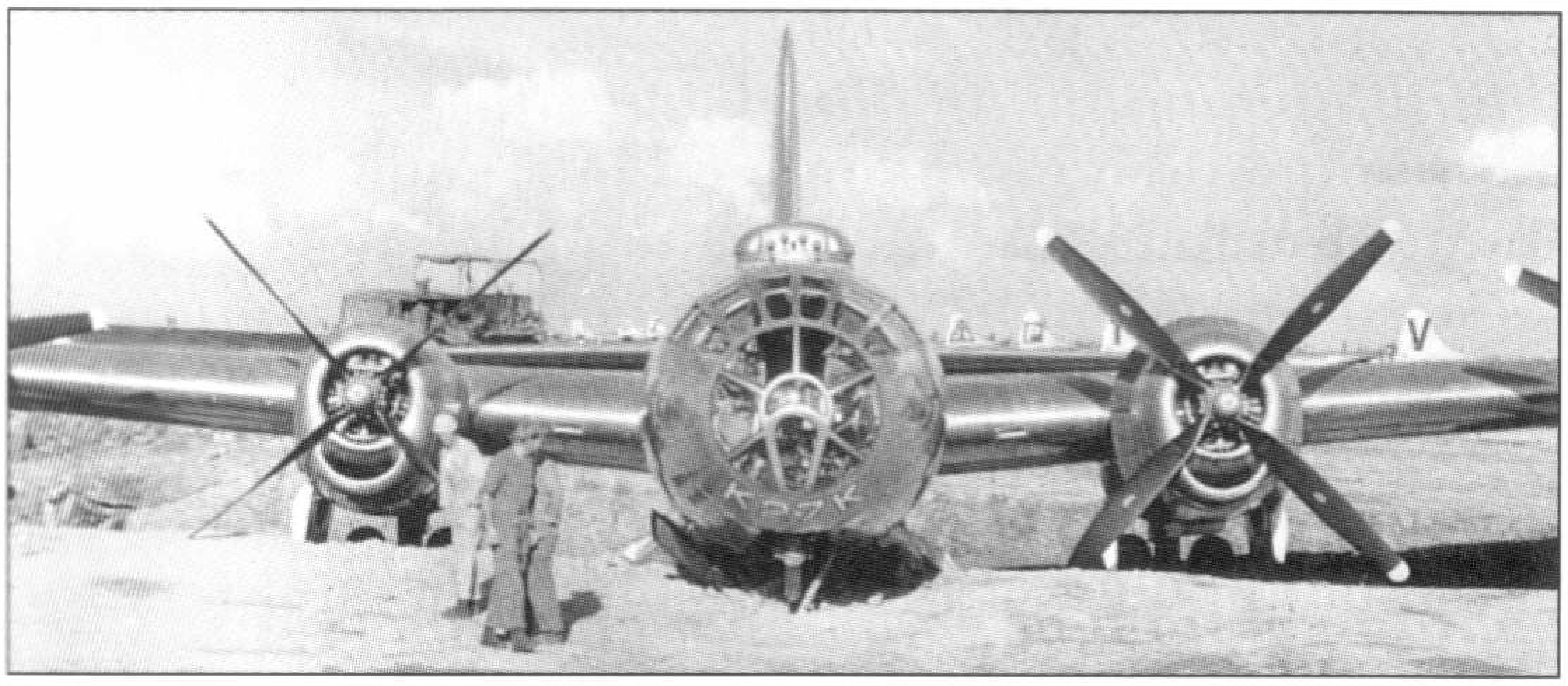
'Today, a Field Order has been issued to strike a large refinery and oil storage tank area in the city of Kawasaki on the west side of Tokyo Bay tonight.

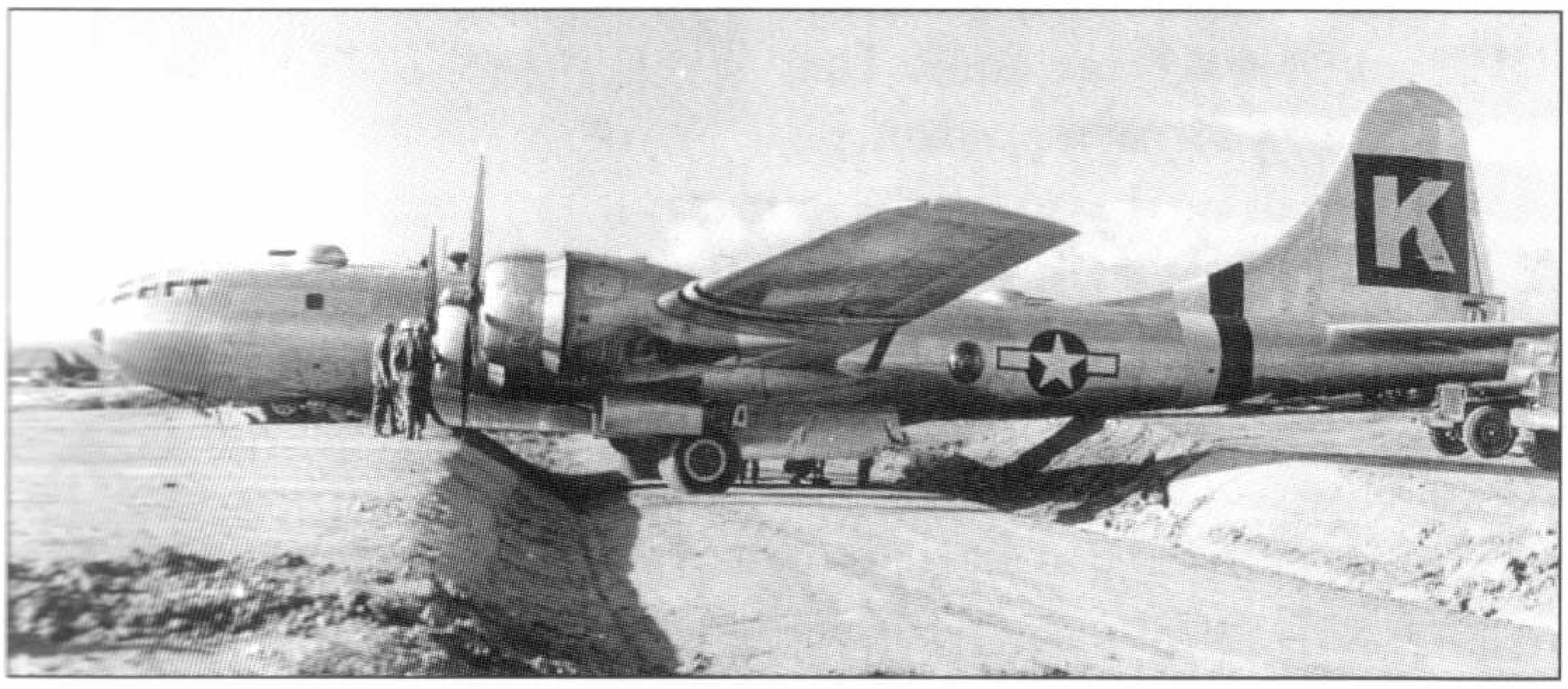
'1500 hrs Briefing – we ride a GI truck to the briefing, which is held in a large auditorium belonging to the wing. The course to and from the target is laid out on a large board with reflective tape. I remember separate breakouts showing heavy flak areas around the target, navigation features and the egress course out.

This spectacular view from the nose of a 39th BG B-29 shows other aircraft from the group releasing incendiaries over Hiratsuka on 16 July 1945. Some 132 bombers from the 314th BW dropped 1163 tons of incendiaries from an altitudes of 10,000–15,000 ft on this mission. No B-29s were lost, although 11 made emergency landings on Iwo. (*AAF*)



Right top and bottom
Apparently intact on Iwo Jima following a landing with battle damage, this B-29 Superfortress of the 330th BG/314th BW was soon repaired and flown back to Guam's North Field. The aircraft overran the runway and was halted when its nose gear struck a sand berm. Visible in the head-on view of the B-29 is a marking that was unique to this group – the tail letter ('K') and the aeroplane-in-group number ('27') appear in black-bordered yellow letters, with the 'K' flanking the number on both sides of the nose. (*Bill Hess*)





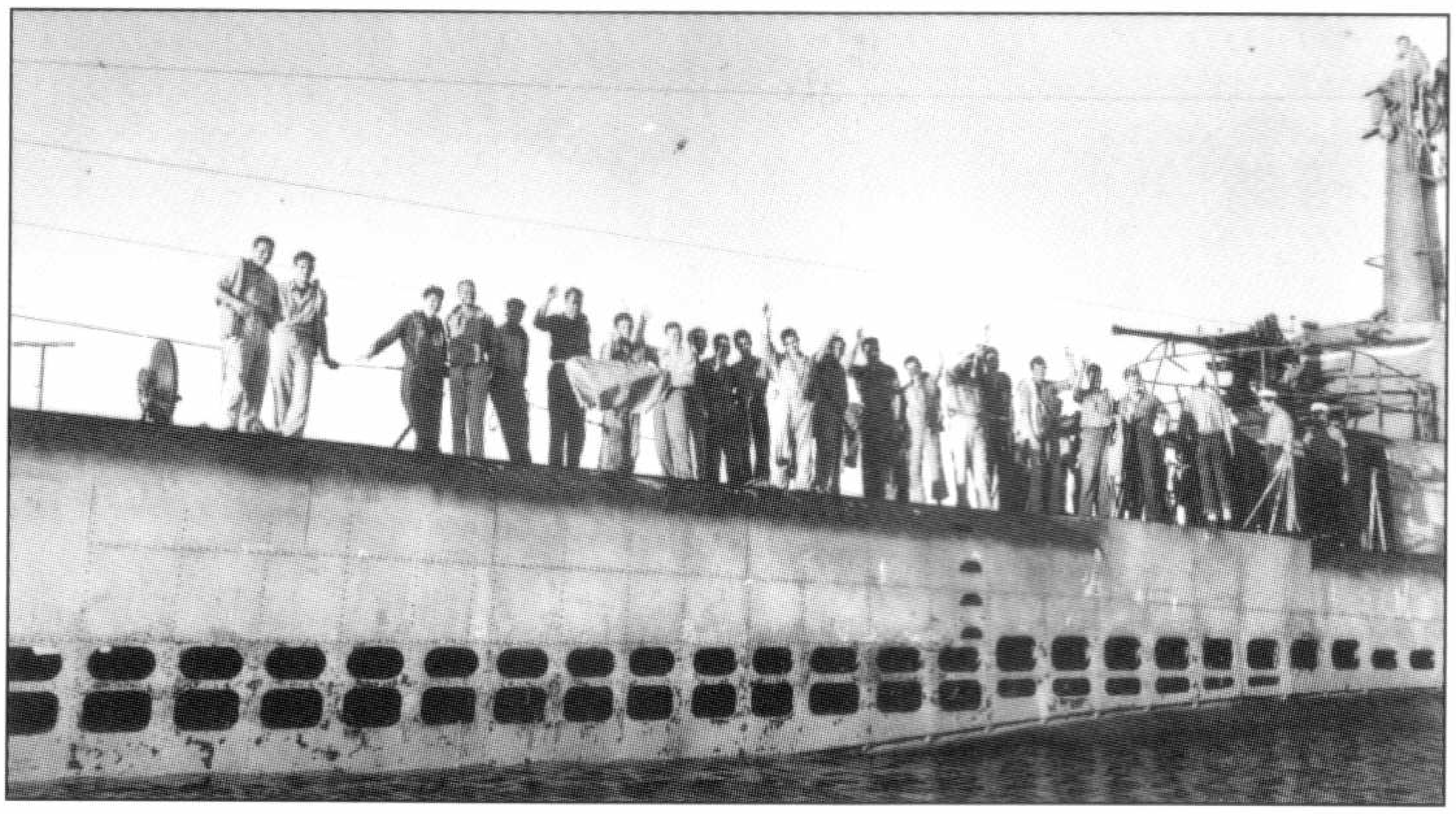
The war could not have been fought without the contribution of those who remained on the ground and made things work. 1Lt Raymond A Pribyla was the adjutant for the 16th BS, part of the 16th BG/315th BW. He did not wear wings on his uniform and did not fly inside a B-29. His job was to handle the administrative operations of the squadron, including the orderly room, billets (which were mostly tents) and flightline, including maintenance. Within the Twentieth Air Force, there were hundreds of men like Pribyla who made a vital contribution to keeping the aerial campaign under way. (*Ken Pribyla*)

'All of this was overlaid on a map of Japan, and on a magnified map of the target area, so when the lights were turned down, it was quite impressive. The presentation included the location of the circling Dumbo (rescue) B-29, and the Navy speaker gave the location of their rescue destroyer and submarines. All of the presenters use pointers with reflective tips. The headings and altitudes of all courses to the target and return are shown, and have previously been given to the navigators.

'Bombing altitude is 16,000 ft (4876 m). Weather for the entire mission, cloud cover and winds over the target are presented by the group meteorologist with the room lights now back on. Before we leave, the squadron flight engineer gives out a copy of the flight plan to each engineer. This a statistical summary table organised like the engineer's log, predicting times, temperatures, power settings, fuel remaining and gross weights for the entire mission, A very handy tool that I helped prepare. This mission will last in excess of 14 hours.

'1700 hrs Mess – all crews go to mess at this time, and while there they pick up a brown paper bag of mess hall prepared sandwiches and K-rations for breakfast. Some may defer on the sandwiches. But one of the scanners will fill a gallon thermos jug of hot coffee to be taken to the aeroplane later.

'Personal Equipment Check out – each crew member checks out his own fitted oxygen mask, sustenance vest, 0.45-cal side arm, with shoulder harness and birdshot ammo, his own parachute and one-man raft attached, a Mae West life preserver, a flak jacket, helmet, throat mike, head set, flashlight and E/E (escape & evasion) kit, which is attached to the same pistol belt that carries his water canteen. He has also been issued previously with a tan flight suit and a hack type wristwatch. The engineer has his own tool kit – an E6-B calculator and a fuel tank measuring stick. All crew members wear GI issue socks and shoes. Transportation from the squadron area is by weapons carrier.



Some Superfortress crews who ditched their bombers at sea were rescued by US Navy submarines on picket duty off the Japanese coast. The two B-29 crews seen on deck on this unidentified submarine were among the lucky ones who lived to fight another day. (*Chester Marshall*)

'1800 hrs Pre-flight of the aircraft – the engineer has gone down to the line earlier in the day while the crew chief was preparing the aircraft for the mission. He probably looked into the engines' accessory sections, checking the fuel and oil connections if work stands were available. In general, he will have had an unhurried look around following a check list, and will have spoken to the crew chief about work being done. The fuel tanks were not yet topped off, so the caps had to be checked at the regular pre-flight. The tail gunner also installed his guns at this earlier time.

'When the crew arrives for the regular pre-flight, the aircraft will have been towed to a line up on the taxyway in the normal take-off position. The engineer could gain access to the top of the aircraft using an upper hatch aft of the APU (auxiliary power unit), but a nearby work stand that will provide access to the top of the wing is available so that he can check that each fuel tank is full and tank caps and access covers are secured, including those for the oil tanks. The APU fuel tank is also checked for service and tank cap on at this time.

'The engineer calculates weight and balance. A slide rule "load adjuster" which comes with the aircraft is used to determine per cent MAC (mean aerodynamic chord), which is usually 24 per cent. The aircraft is loaded with 6785 gallons of fuel (100/130) grade, 40 500-lb (227-kg) composition B bombs, 20 in each bomb-bay, that actually weigh 550 lbs (256 kg) each and 85 US gallons of 1100 (60 wt) oil in each engine oil tank. The take-off gross weight is approximately 133,000 lbs (60,327kg). This weight is reported to the aircraft commander.

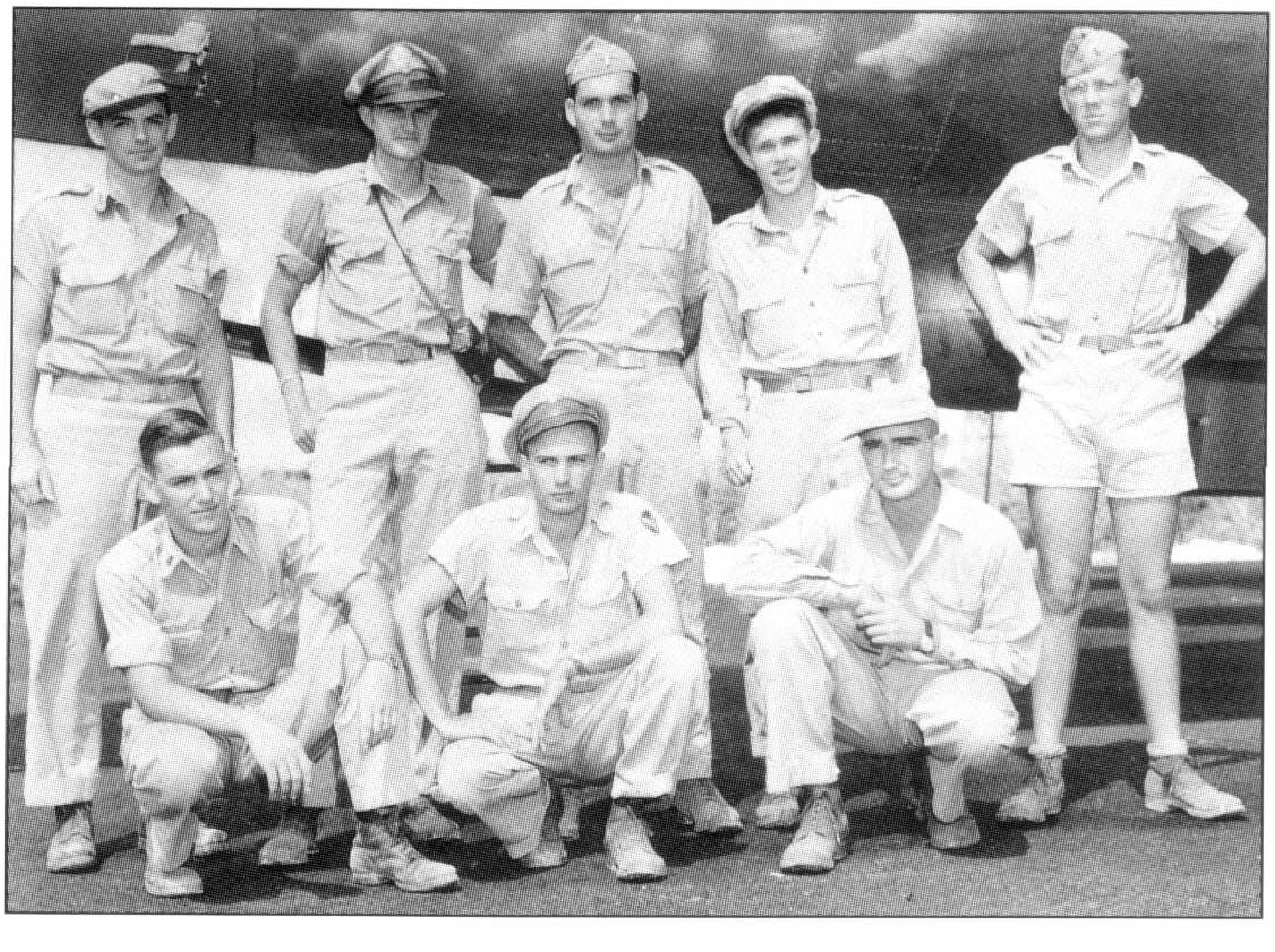
STARTING UP

'The crew pulls the props through. To insure there are no liquid locks in lower engine cylinders, the propellers on each engine must be manually pulled through the equivalent of two engine revolutions.

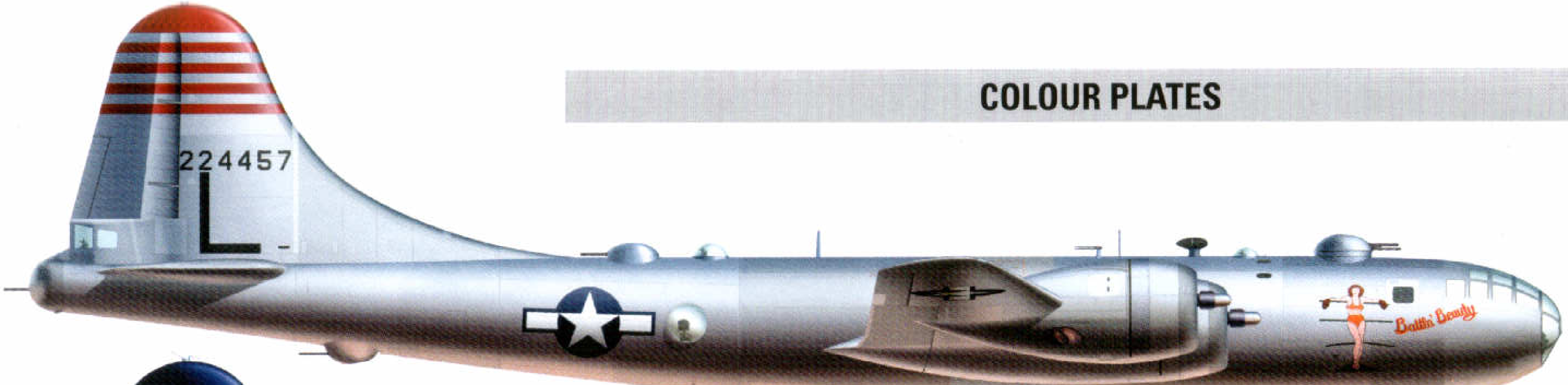
'Personal Equipment Inspection – the aeroplane commander looks closely at each crew member for proper personal equipment while they are lined up along side the aeroplane.

'1915 hrs – the crew boards the aeroplane and buckles up. The tail gunner starts the APU, and after it warms up he puts the generator on line. Then he proceeds to his position. The aircraft commander receives (*text continues on page 65*)

Since the B-29 crews had no way to gather weather data over Japan at first, this group of servicemen became the first to establish a weather data gathering system. At least one member of this group flew with a Superfortress crew on every mission so as to be able to make forecasts on the spot.



COLOUR PLATES


224457
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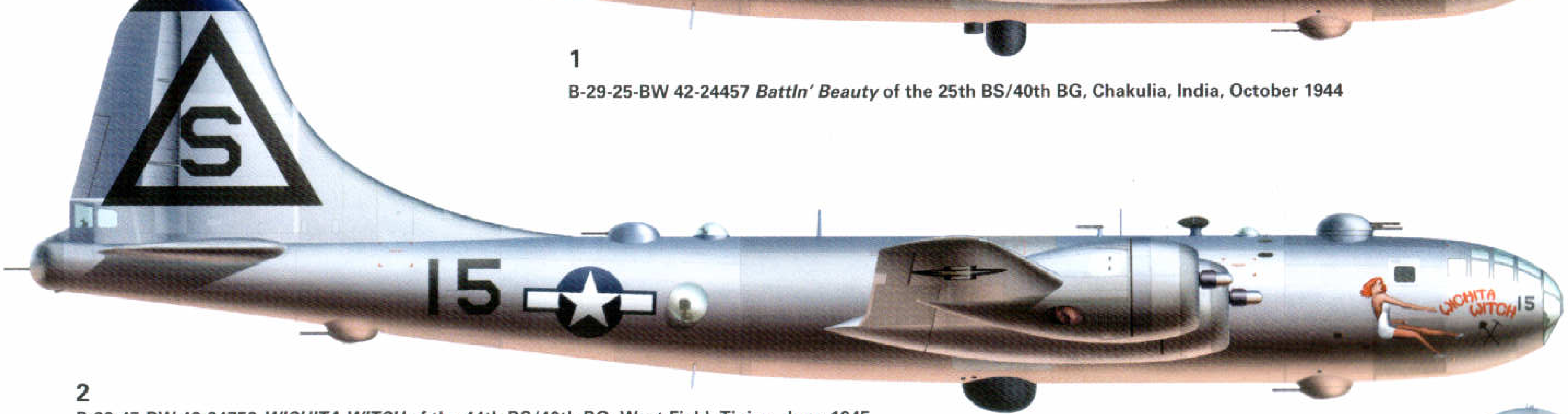
Battin' Beauty

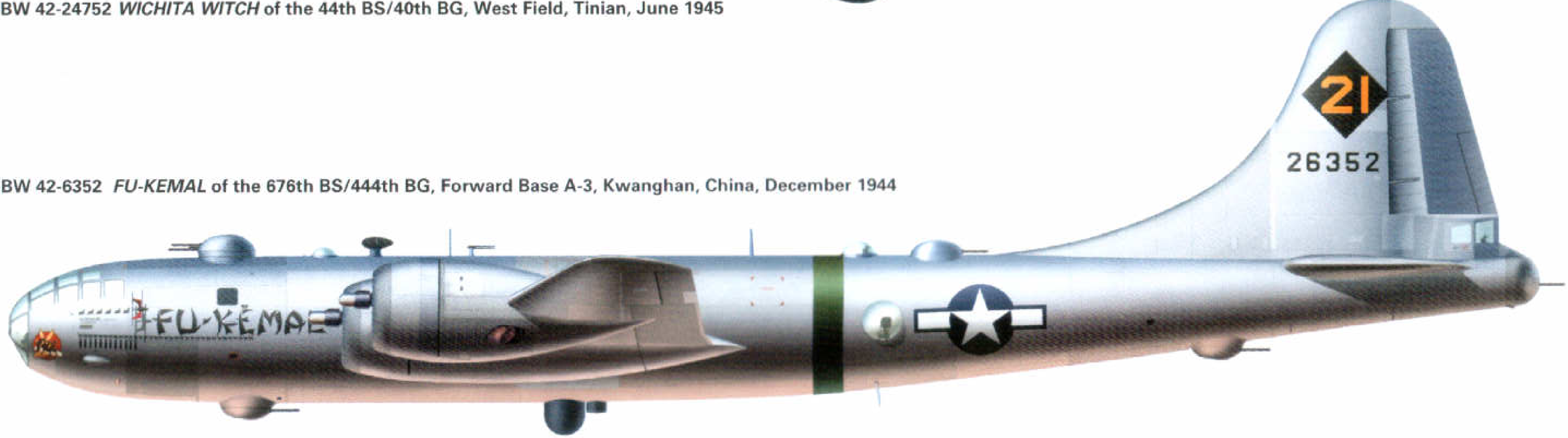
1

B-29-25-BW 42-24457 *BattIn' Beauty* of the 25th BS/40th BG, Chakulia, India, October 1944


S
15
WICHITA WITCH
15

2

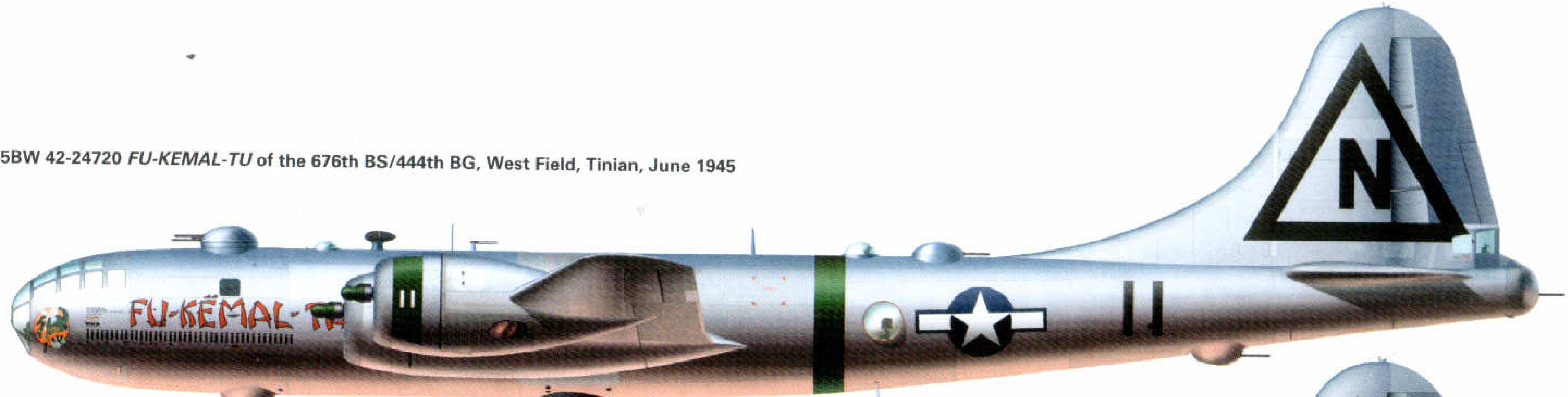
B-29-45-BW 42-24752 *WICHITA WITCH* of the 44th BS/40th BG, West Field, Tinian, June 1945


21
26352
FU-KEMAL

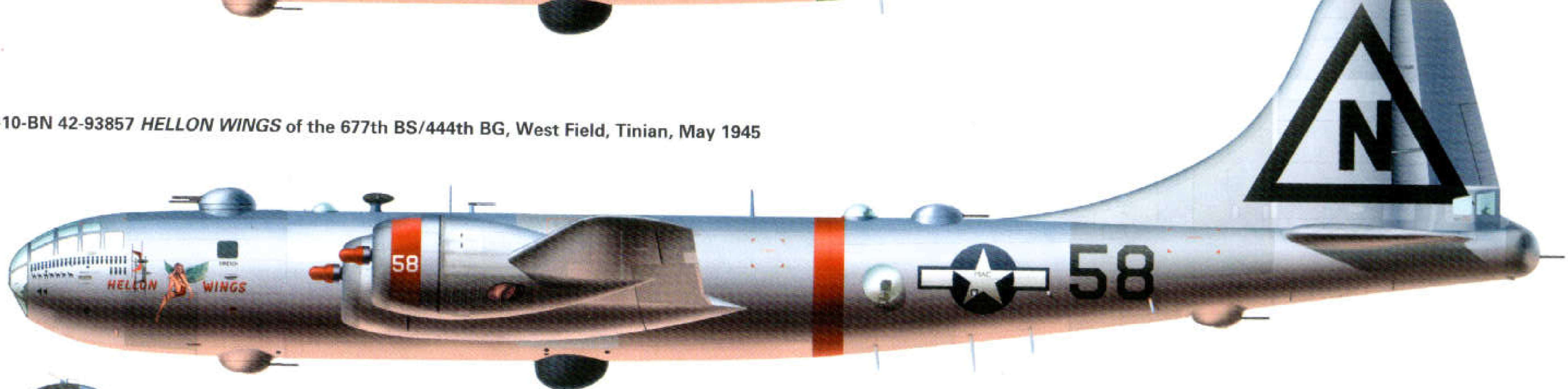
3

B-29-10-BW 42-6352 *FU-KEMAL* of the 676th BS/444th BG, Forward Base A-3, Kwanghan, China, December 1944

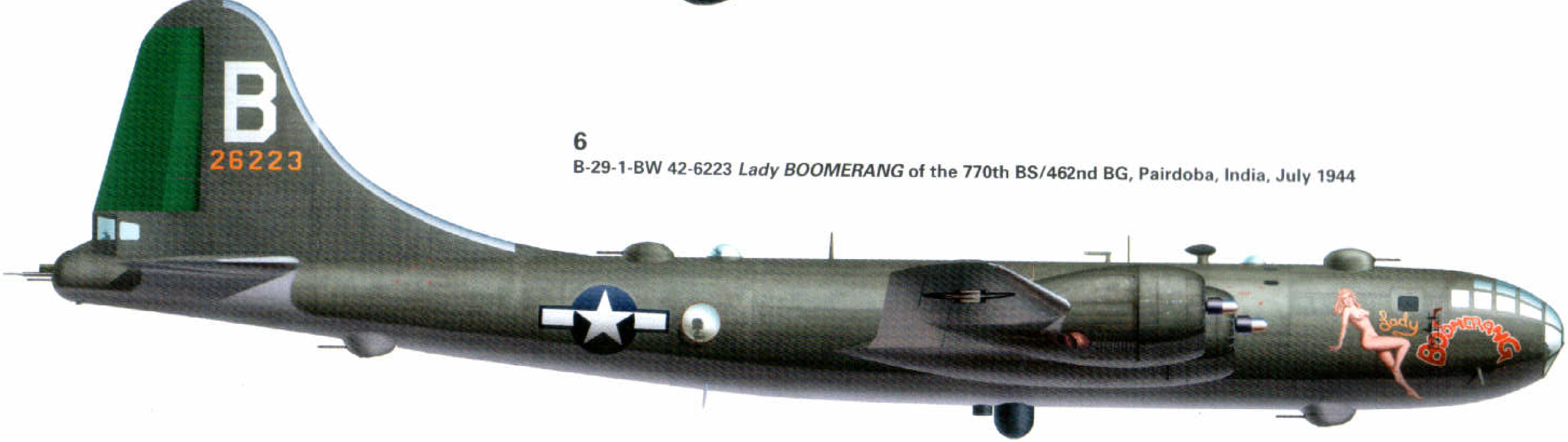
4
B-29-45BW 42-24720 *FU-KEMAL-TU* of the 676th BS/444th BG, West Field, Tinian, June 1945


FU-KEMAL-TU
11
N
11

5
B-29A-10-BN 42-93857 *HELLON WINGS* of the 677th BS/444th BG, West Field, Tinian, May 1945

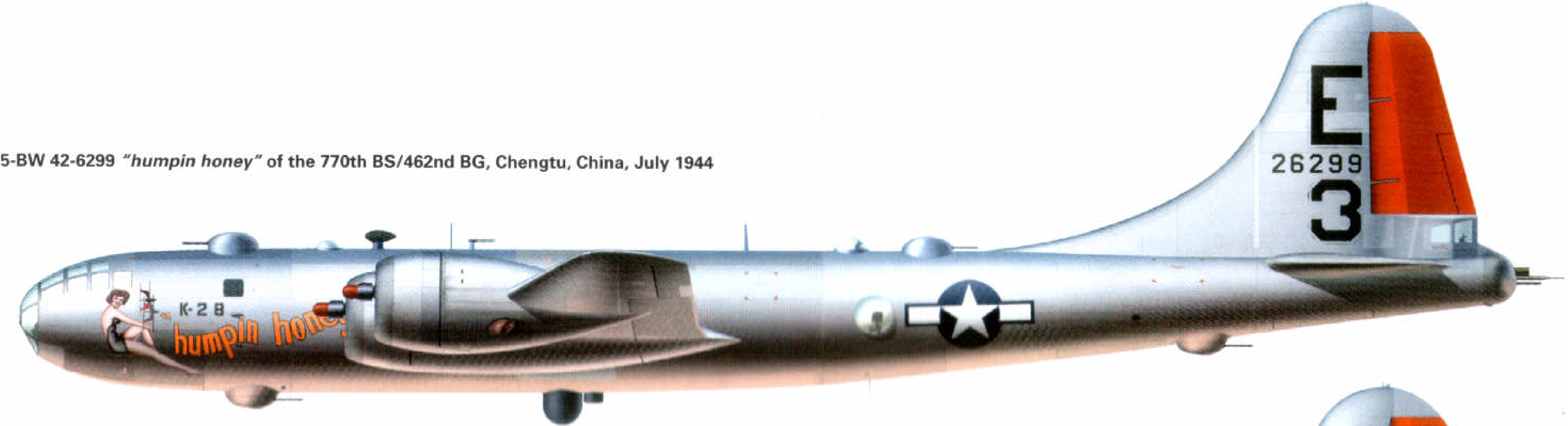

HELLON WINGS
58
58
N

6
B-29-1-BW 42-6223 *Lady BOOMERANG* of the 770th BS/462nd BG, Pairdoba, India, July 1944


B
26223
Lady BOOMERANG

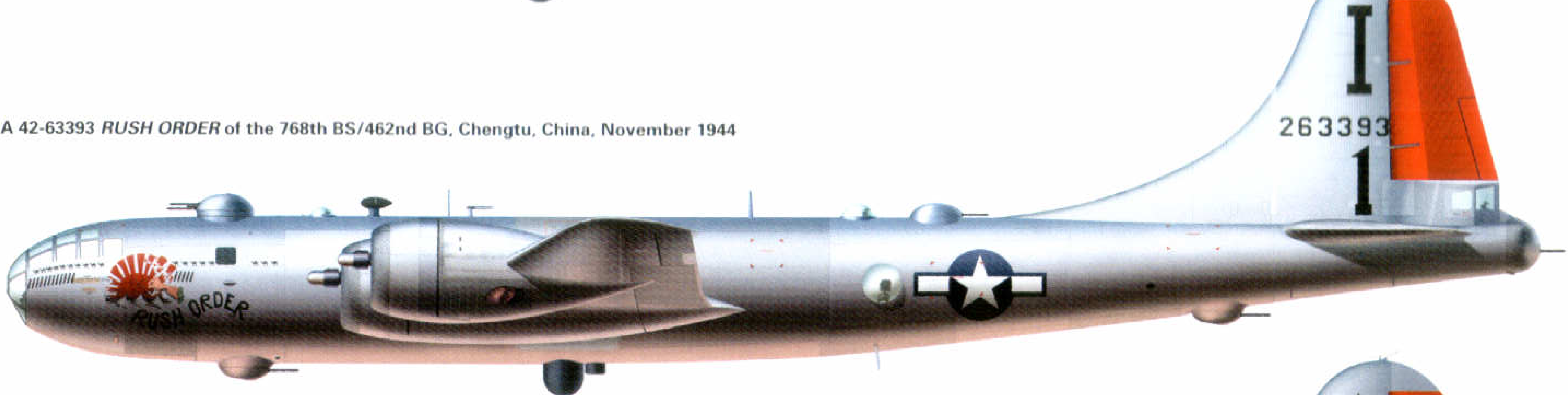
7

B-29-5-BW 42-6299 *"humpin honey"* of the 770th BS/462nd BG, Chengtu, China, July 1944


E
26299
3
K-28
humpin honey

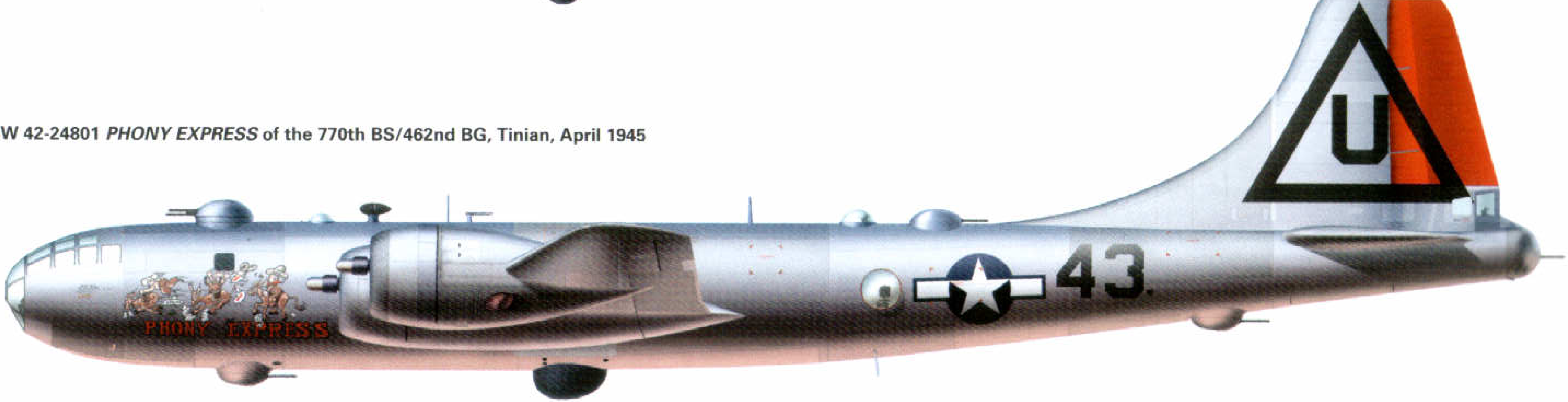
8

B-29-10-BA 42-63393 *RUSH ORDER* of the 768th BS/462nd BG, Chengtu, China, November 1944


I
263393
1
RUSH ORDER

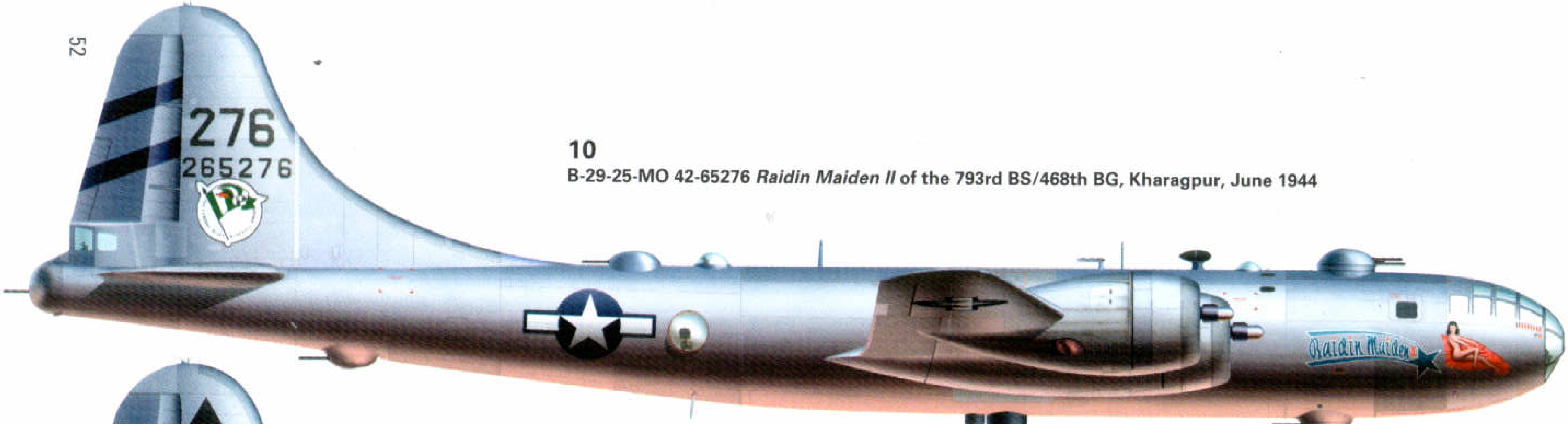
9

B-29-50-BW 42-24801 *PHONY EXPRESS* of the 770th BS/462nd BG, Tinian, April 1945


U
43
PHONY EXPRESS

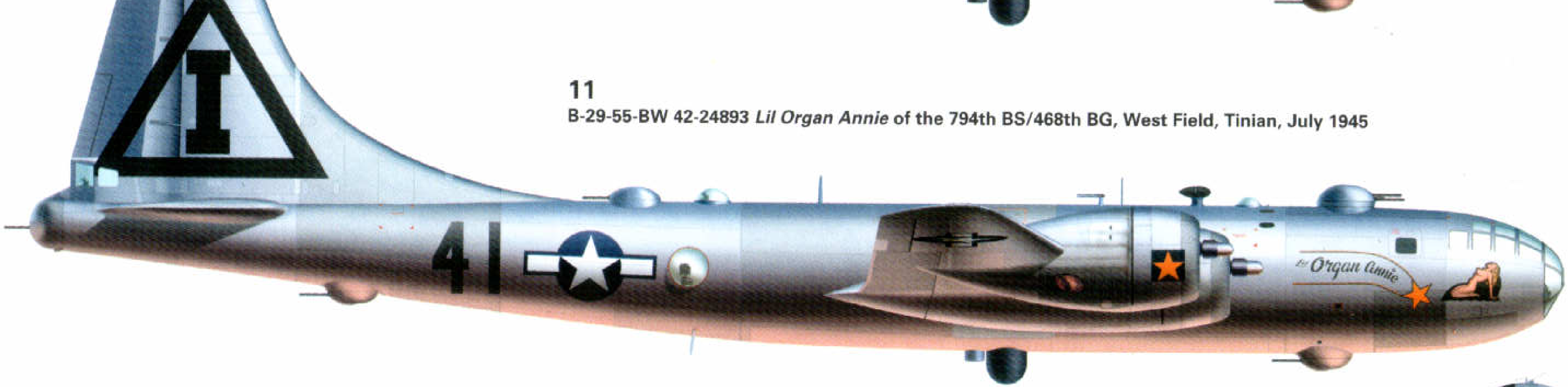
10

B-29-25-MO 42-65276 *Raidin Maiden II* of the 793rd BS/468th BG, Kharagpur, June 1944


276
265276
Raidin Maiden II

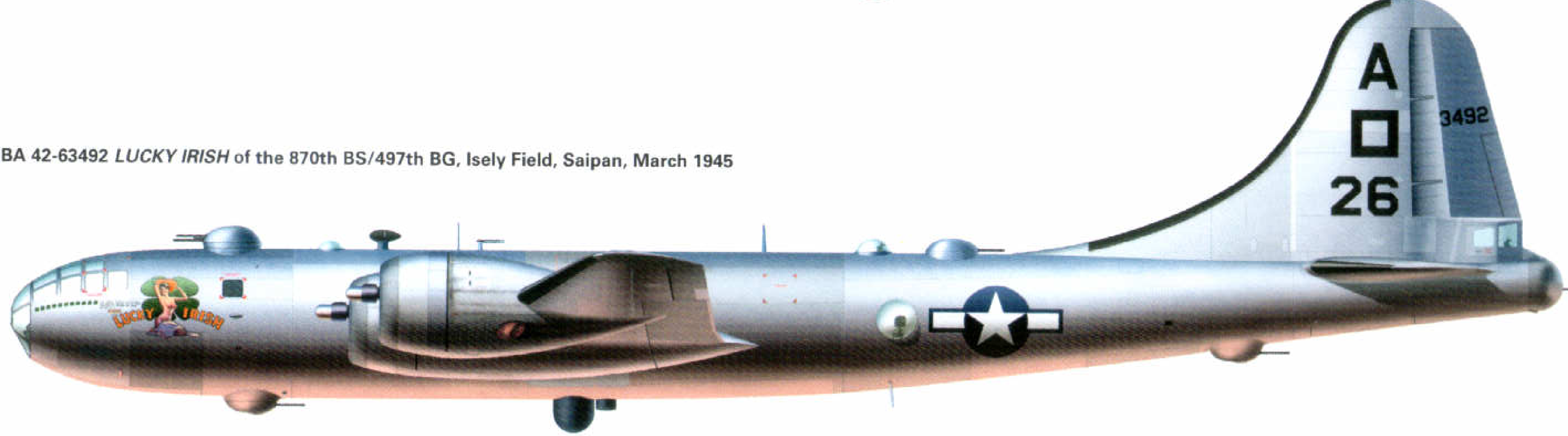
11

B-29-55-BW 42-24893 *Lil Organ Annie* of the 794th BS/468th BG, West Field, Tinian, July 1945

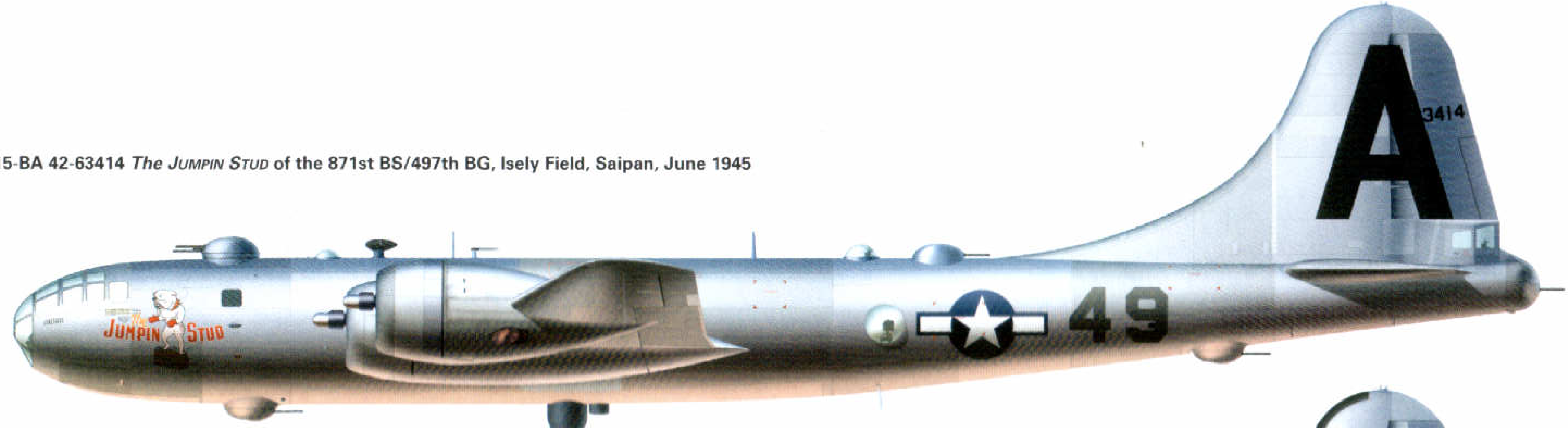

I
41
Lil Organ Annie

12

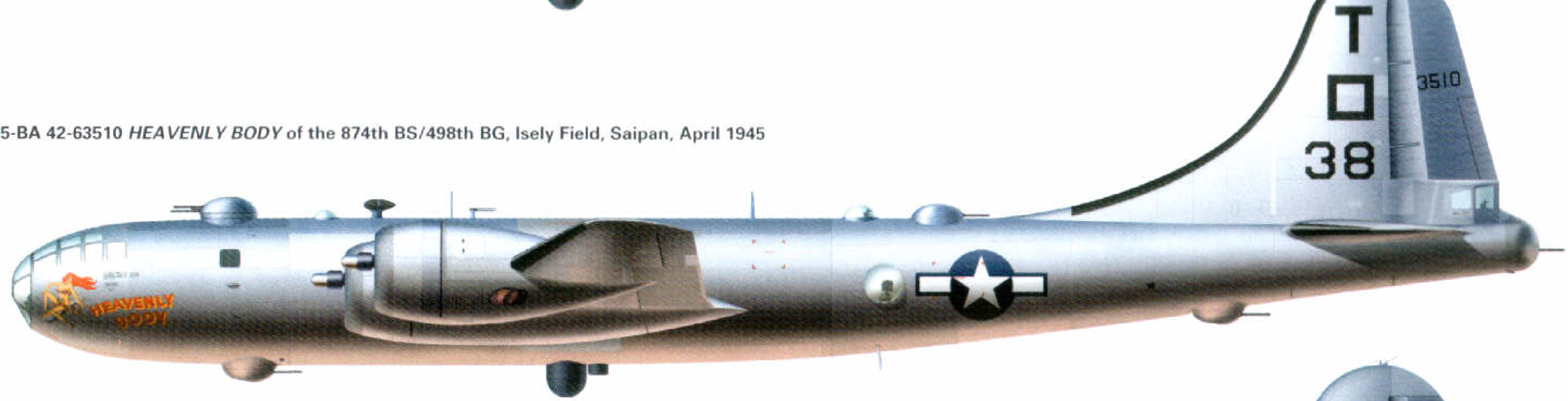
B-29-20-BA 42-63492 *LUCKY IRISH* of the 870th BS/497th BG, Isely Field, Saipan, March 1945


A
3492
26
LUCKY IRISH

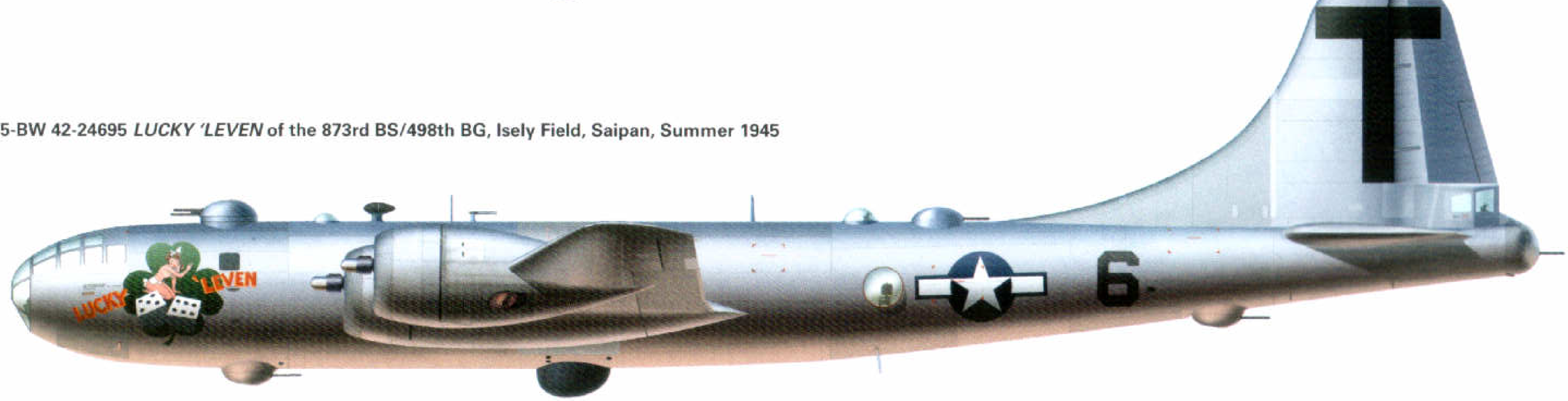
13
B-29-15-BA 42-63414 *The Jumpin Stud* of the 871st BS/497th BG, Isely Field, Saipan, June 1945


A
3414
49
The
JUMPIN STUD

14
B-29-25-BA 42-63510 *HEAVENLY BODY* of the 874th BS/498th BG, Isely Field, Saipan, April 1945

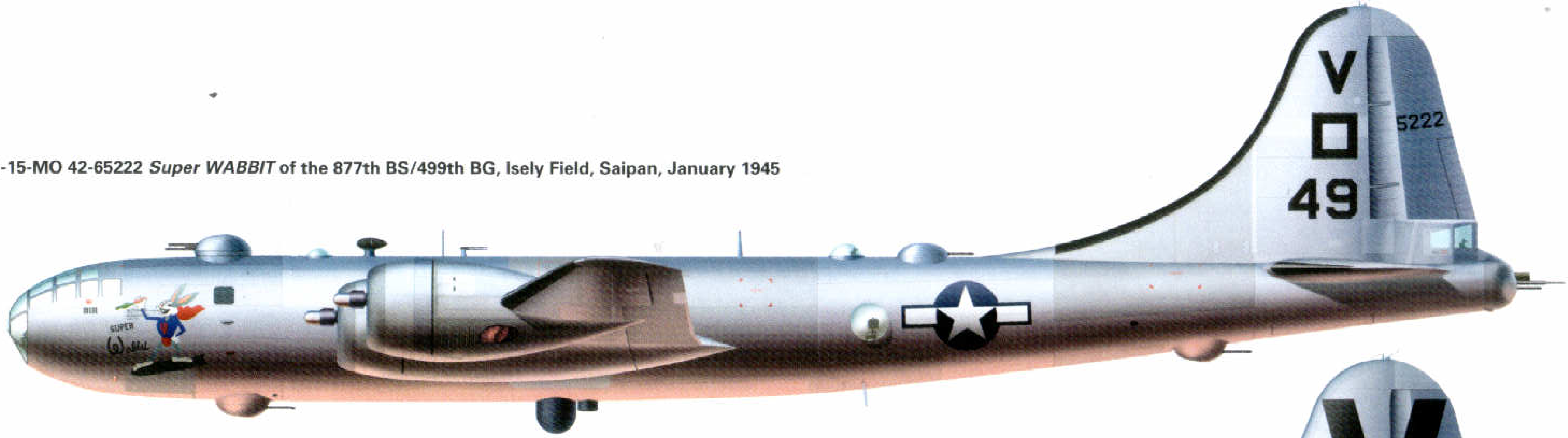

T
3510
38
HEAVENLY BODY

15
B-29-45-BW 42-24695 *LUCKY 'LEVEN* of the 873rd BS/498th BG, Isely Field, Saipan, Summer 1945


T
6
LUCKY 'LEVEN

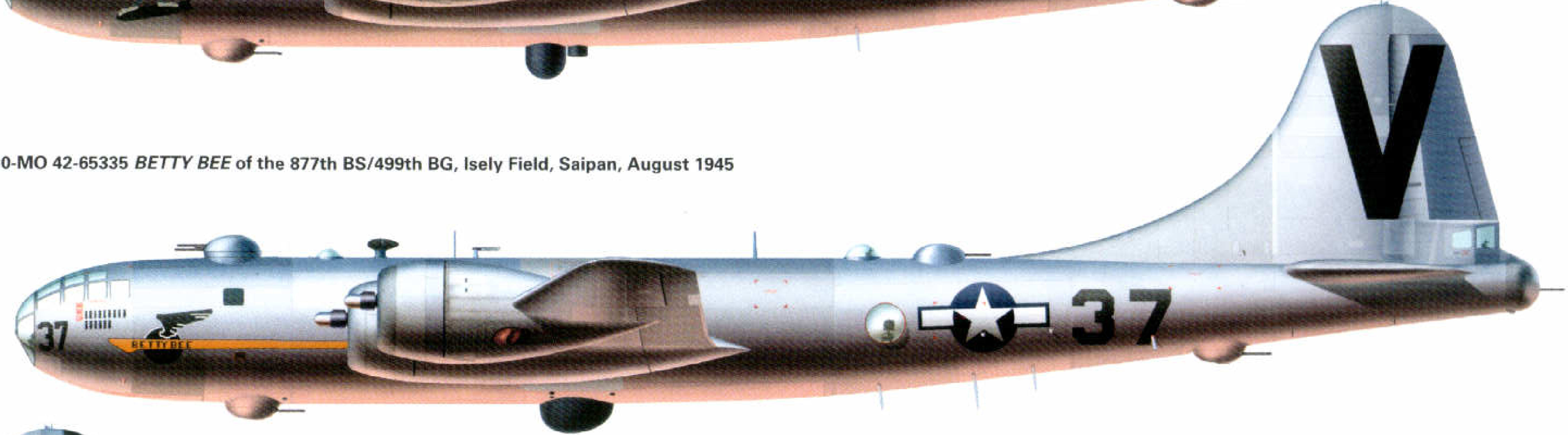
16

B-29-15-MO 42-65222 *Super WABBIT* of the 877th BS/499th BG, Isely Field, Saipan, January 1945


V
49
5222
SUPER
Wabbit

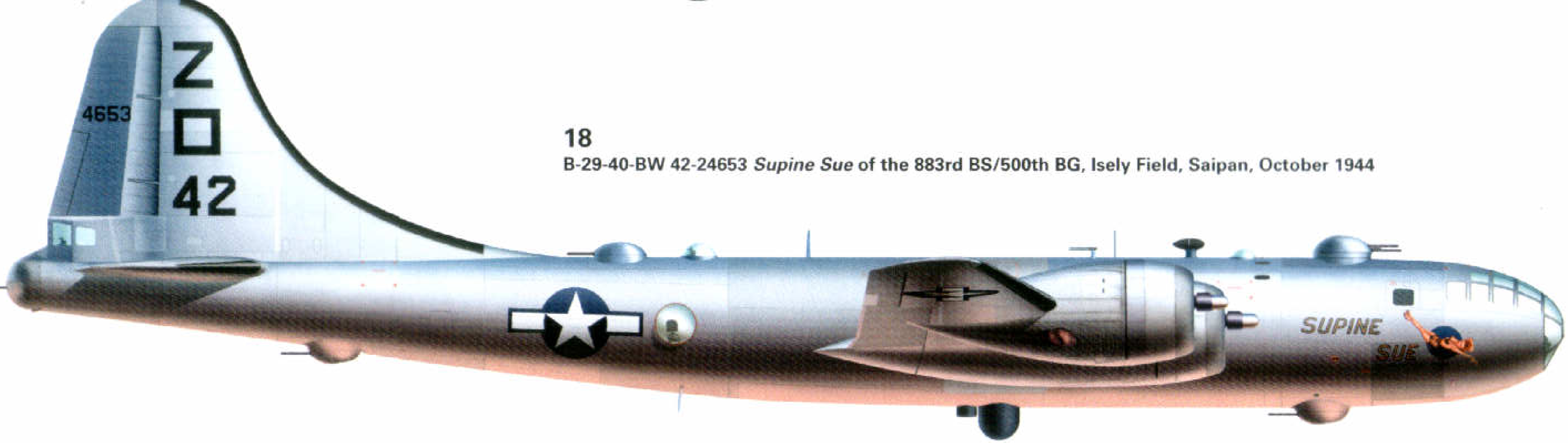
17

B-29-30-MO 42-65335 *BETTY BEE* of the 877th BS/499th BG, Isely Field, Saipan, August 1945


V
37
BETTY BEE
37

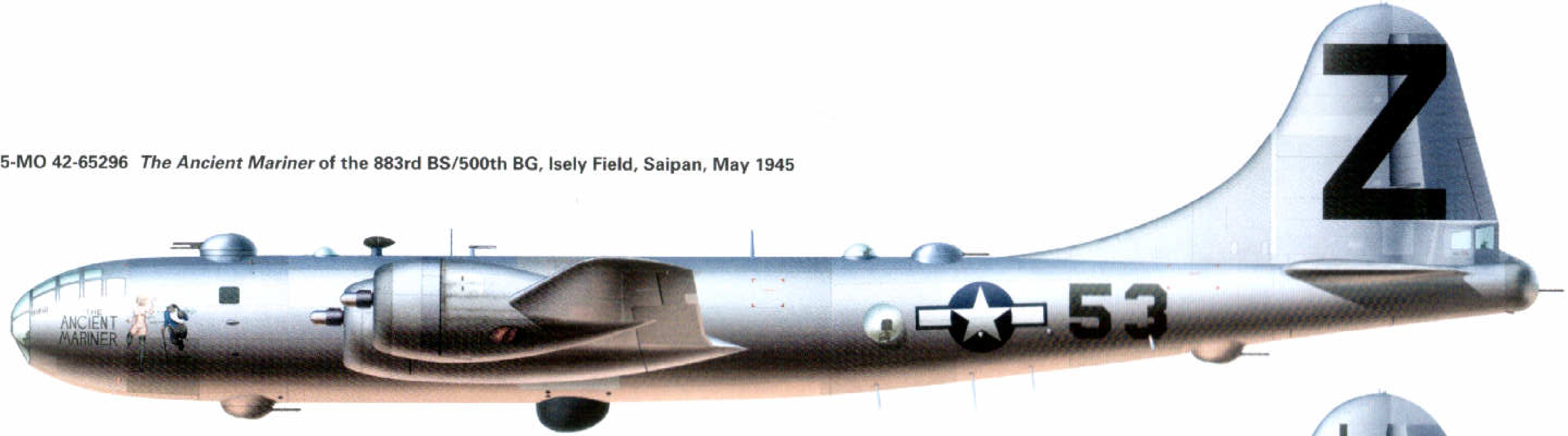
18

B-29-40-BW 42-24653 *Supine Sue* of the 883rd BS/500th BG, Isely Field, Saipan, October 1944


Z
42
4653
SUPINE
SUE

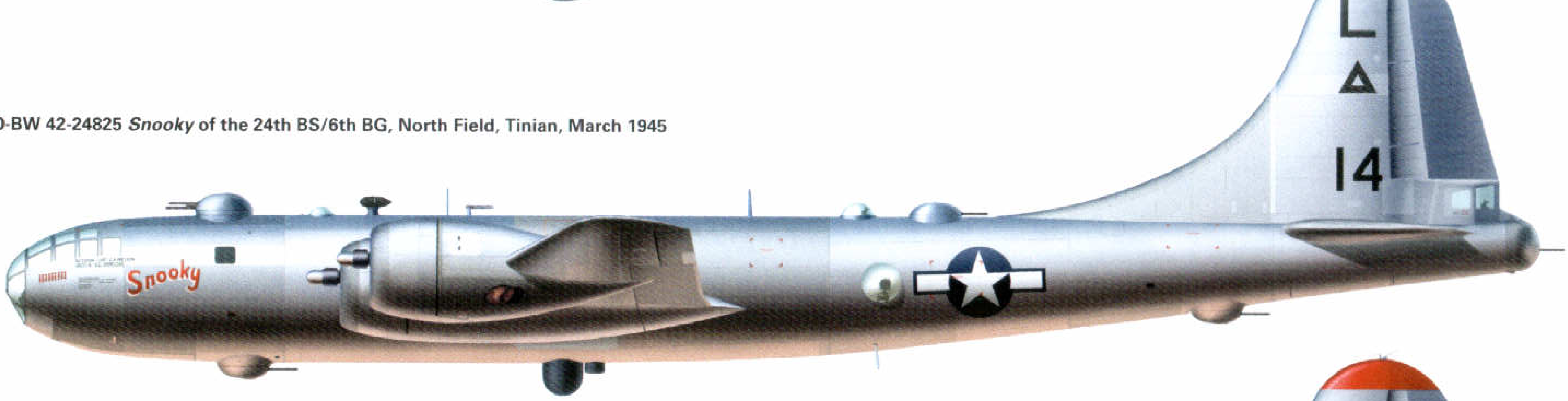
19

B-29-25-MO 42-65296 *The Ancient Mariner* of the 883rd BS/500th BG, Isely Field, Saipan, May 1945


Z
53
THE ANCIENT MARINER

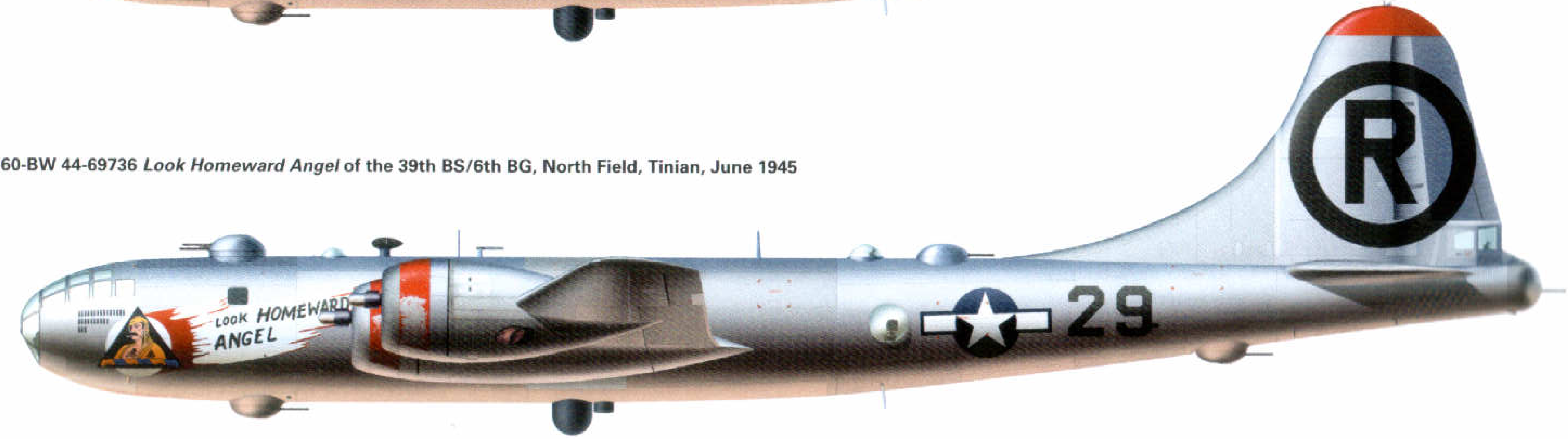
20

B-29-50-BW 42-24825 *Snooky* of the 24th BS/6th BG, North Field, Tinian, March 1945



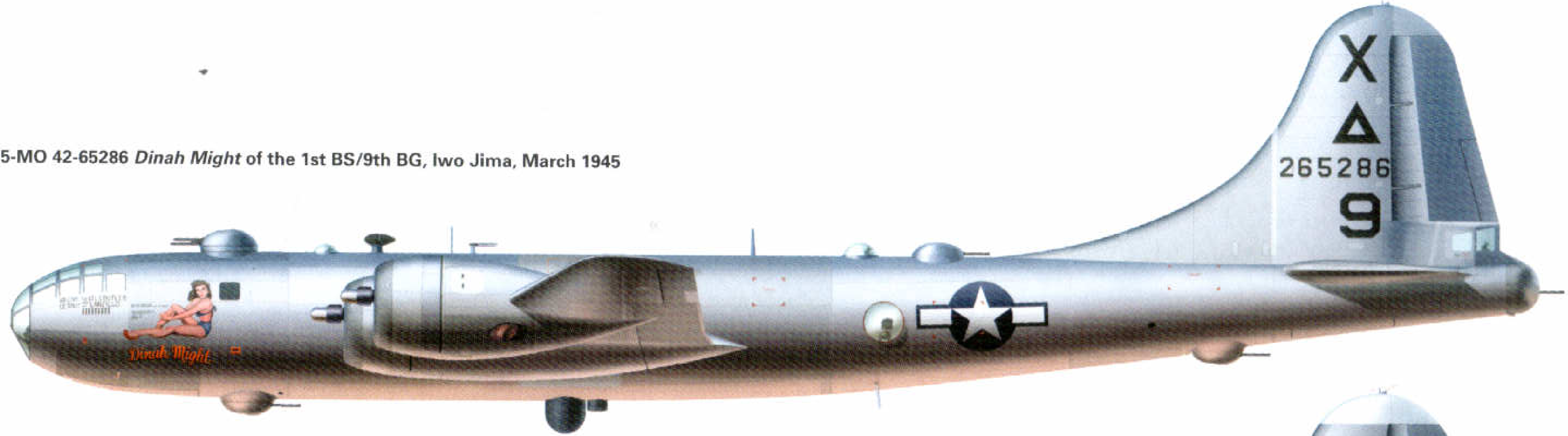
21

B-29-60-BW 44-69736 *Look Homeward Angel* of the 39th BS/6th BG, North Field, Tinian, June 1945


R
29
LOOK HOMEWARD ANGEL

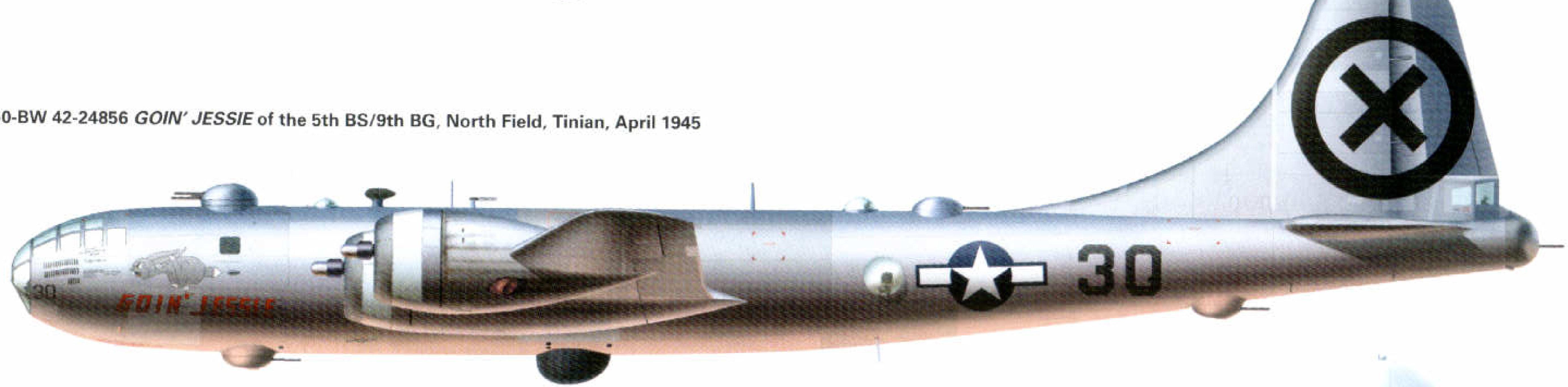
22

B-29-25-MO 42-65286 *Dinah Might* of the 1st BS/9th BG, Iwo Jima, March 1945


X
Δ
265286
9
Dinah Might

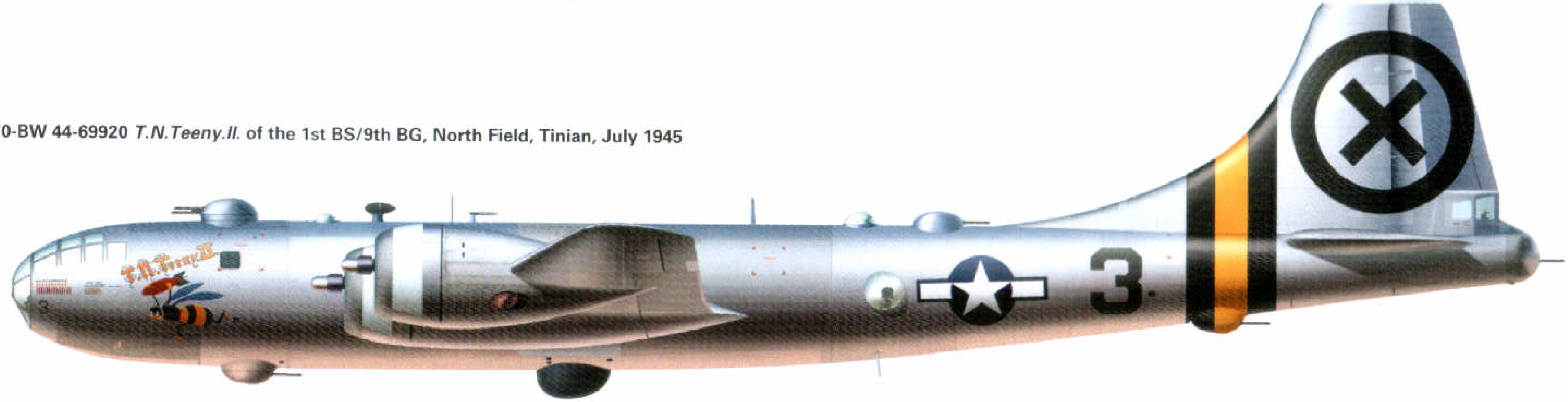
23

B-29-50-BW 42-24856 *GOIN' JESSIE* of the 5th BS/9th BG, North Field, Tinian, April 1945

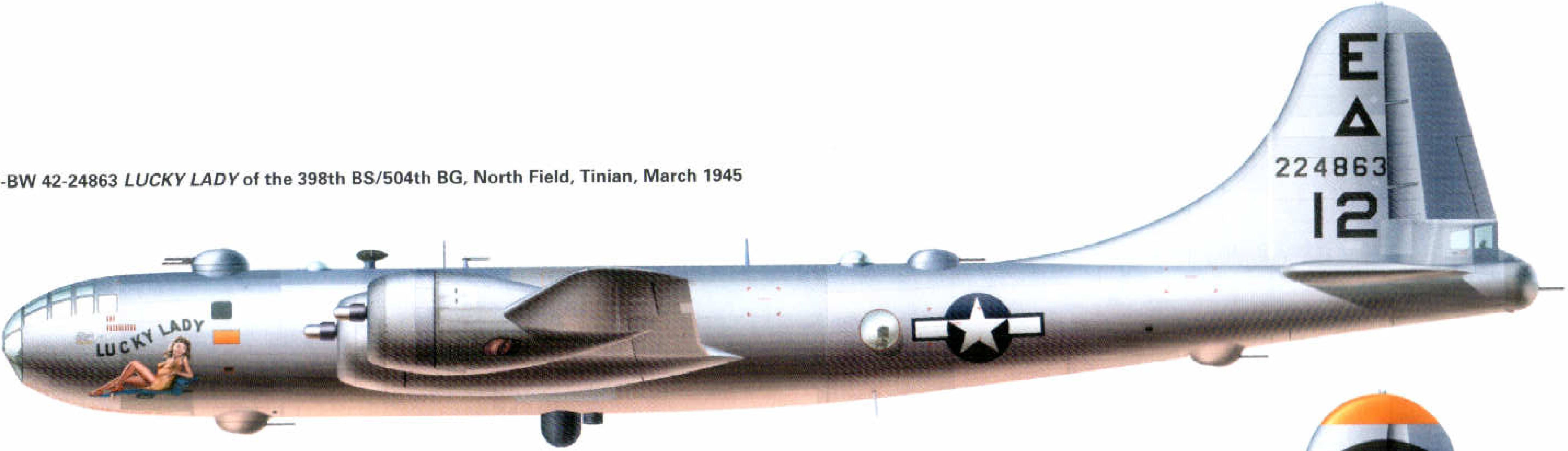

30
GOIN' JESSIE
30

24

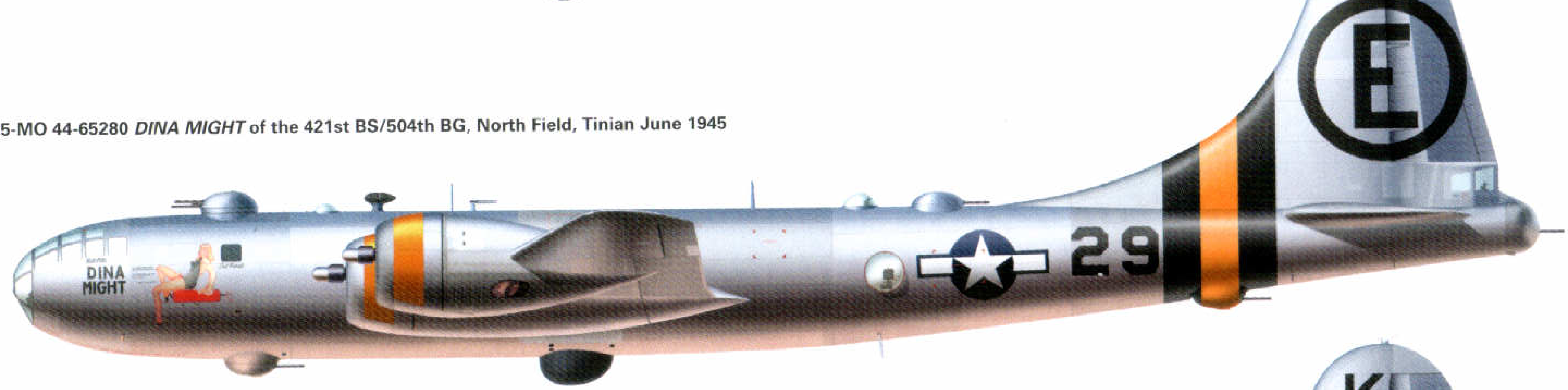
B-29-70-BW 44-69920 *T.N.Teeny.II.* of the 1st BS/9th BG, North Field, Tinian, July 1945


T.N.Teeny.II
3
3

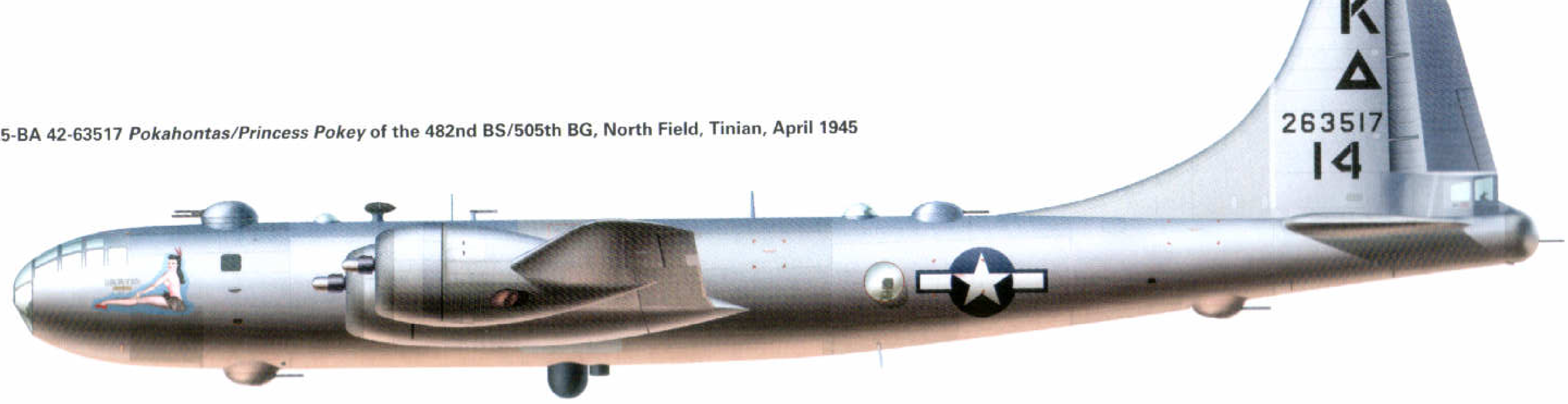
25
B-29-50-BW 42-24863 *LUCKY LADY* of the 398th BS/504th BG, North Field, Tinian, March 1945


E
Δ
224863
12
LUCKY LADY

26
B-29-25-MO 44-65280 *DINA MIGHT* of the 421st BS/504th BG, North Field, Tinian June 1945

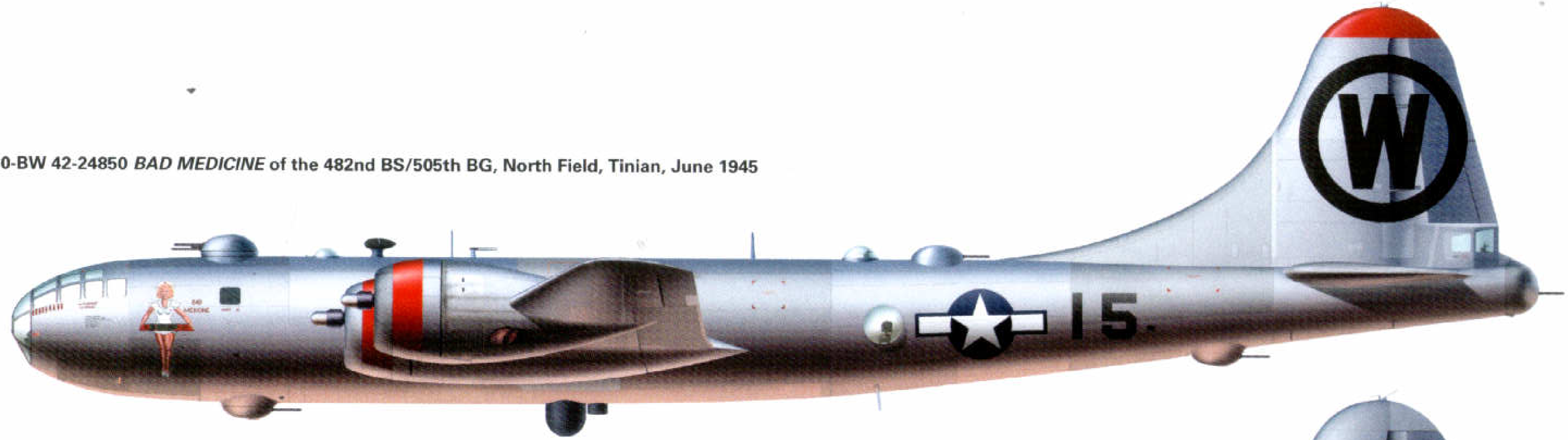

E
29
DINA
MIGHT

27
B-29-25-BA 42-63517 *Pokahontas/Princess Pokey* of the 482nd BS/505th BG, North Field, Tinian, April 1945


K
Δ
263517
14

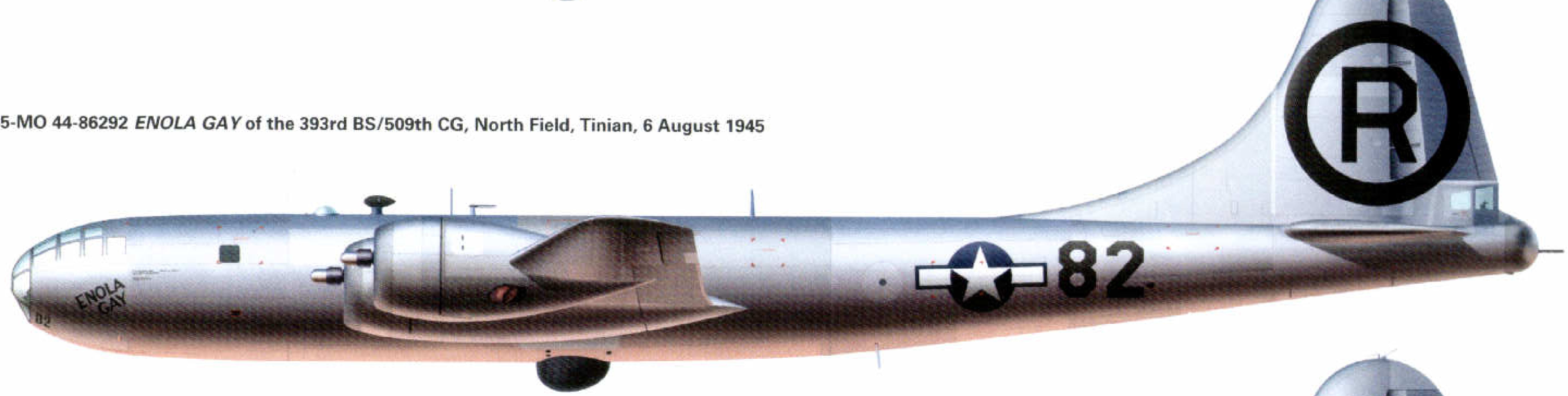
28

B-29-50-BW 42-24850 *BAD MEDICINE* of the 482nd BS/505th BG, North Field, Tinian, June 1945


W
15.
BAD MEDICINE

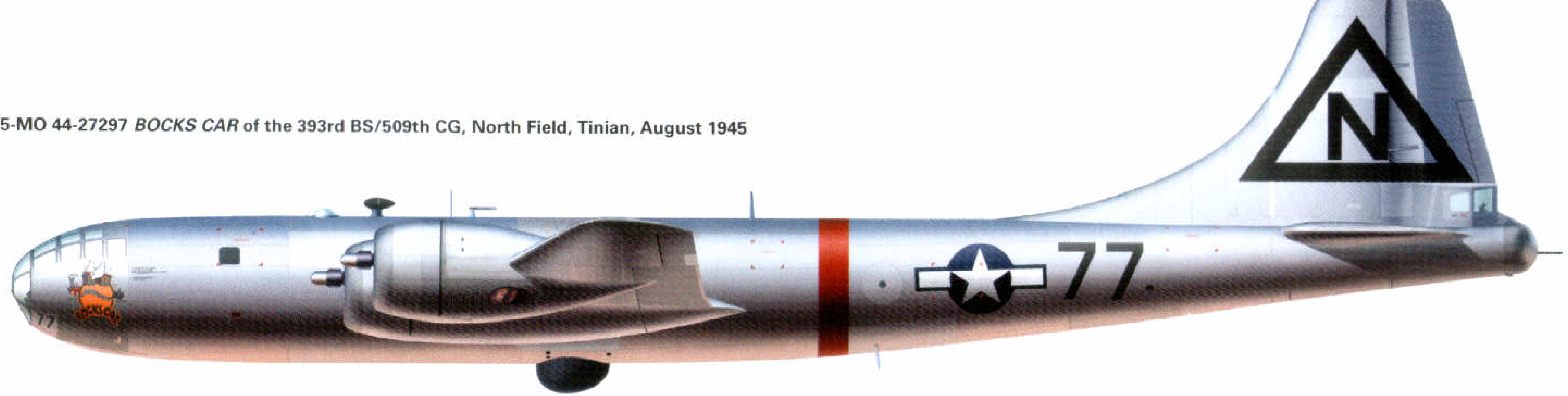
29

B-29-45-MO 44-86292 *ENOLA GAY* of the 393rd BS/509th CG, North Field, Tinian, 6 August 1945


R
82
ENOLA GAY
82

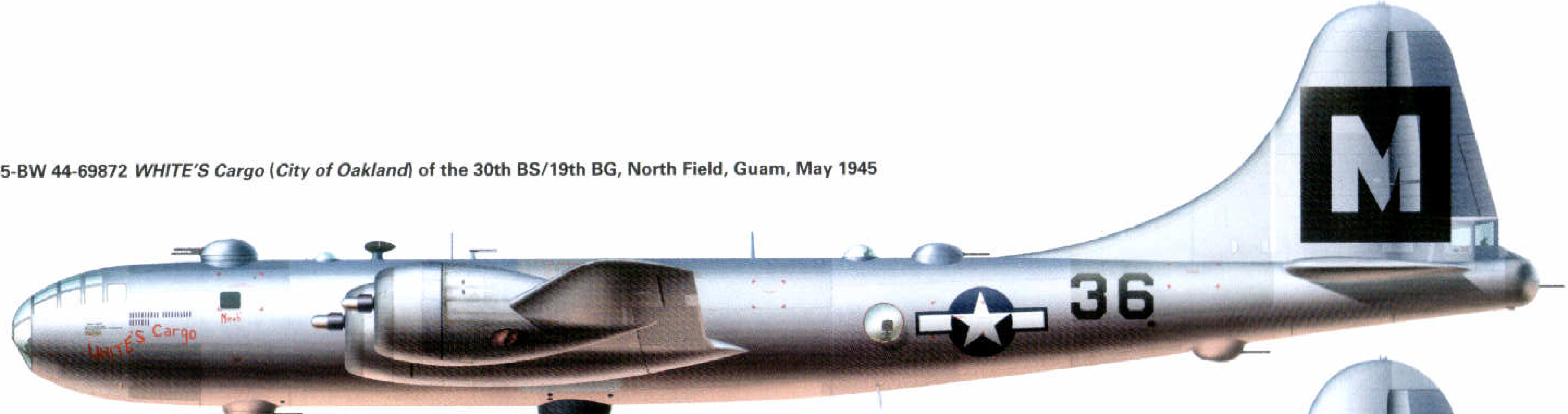
30

B-29-35-MO 44-27297 *BOCKS CAR* of the 393rd BS/509th CG, North Field, Tinian, August 1945


N
77.
BOCKS CAR
77

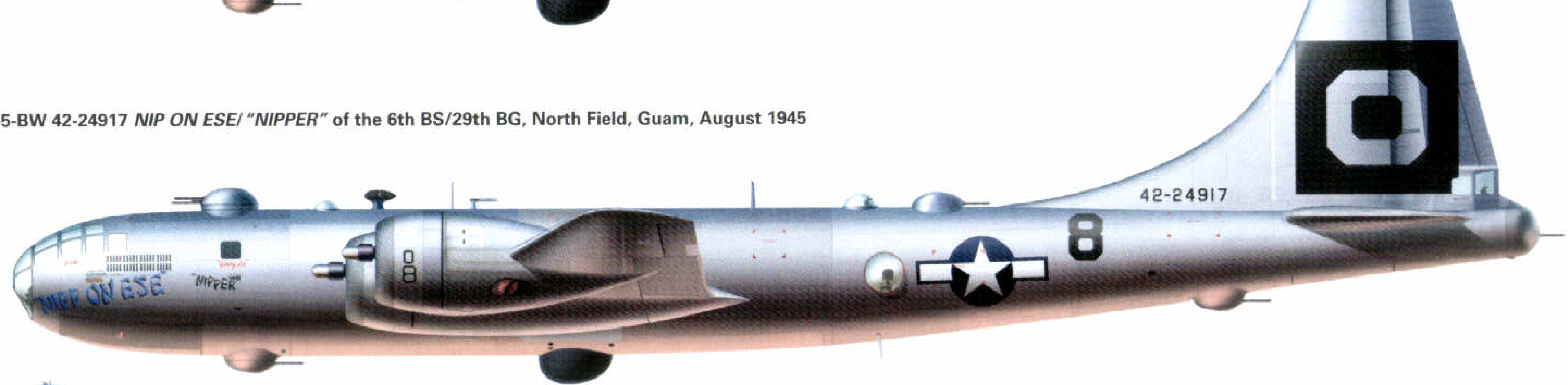
31

B-29-65-BW 44-69872 ***WHITE'S Cargo*** (*City of Oakland*) of the 30th BS/19th BG, North Field, Guam, May 1945


WHITE'S Cargo
M
36

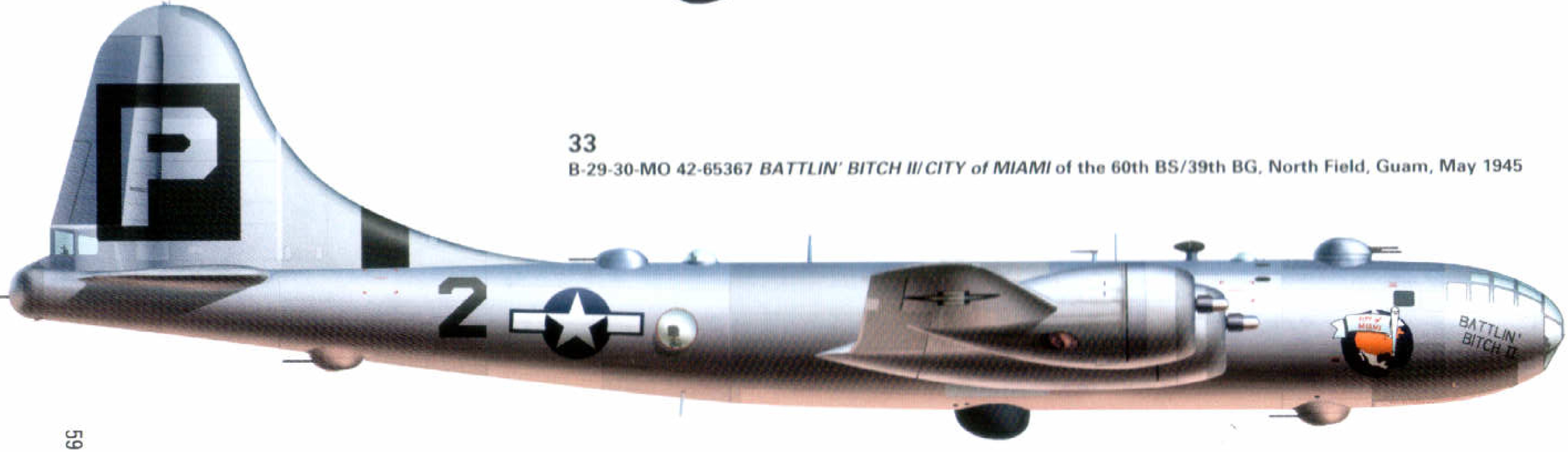
32

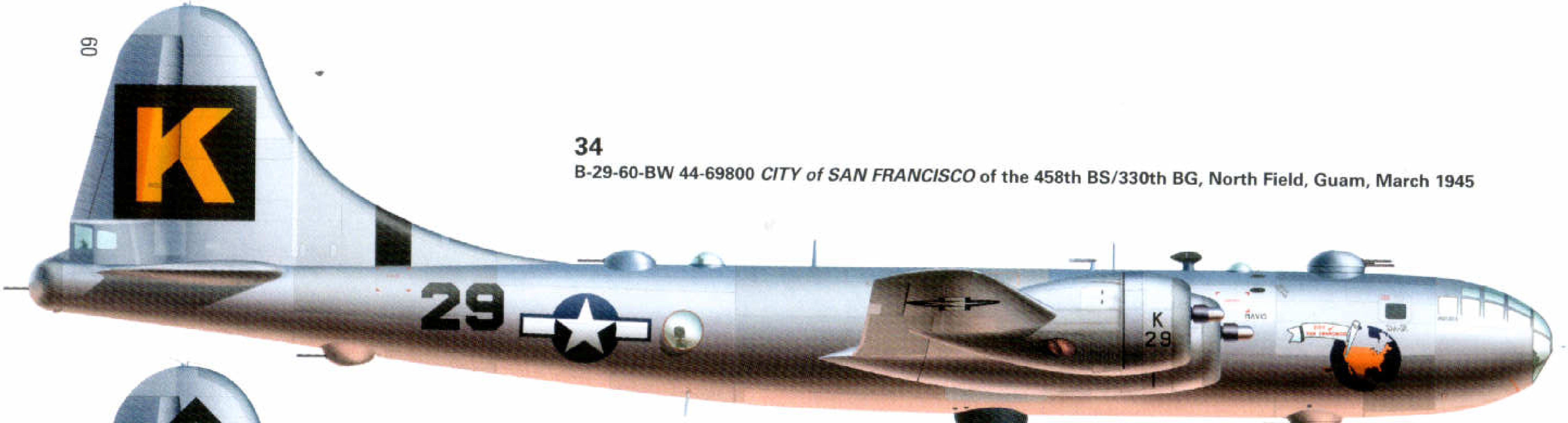
B-29-55-BW 42-24917 ***NIP ON ESE/ "NIPPER"*** of the 6th BS/29th BG, North Field, Guam, August 1945


NIP ON ESE
"NIPPER"
O
8
42-24917

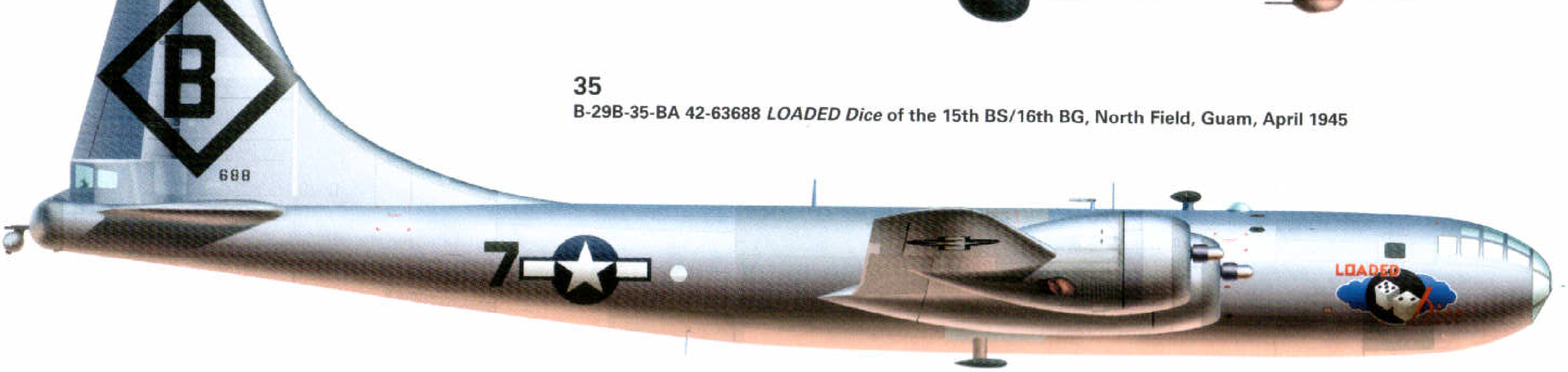
33

B-29-30-MO 42-65367 ***BATTLIN' BITCH II/CITY of MIAMI*** of the 60th BS/39th BG, North Field, Guam, May 1945

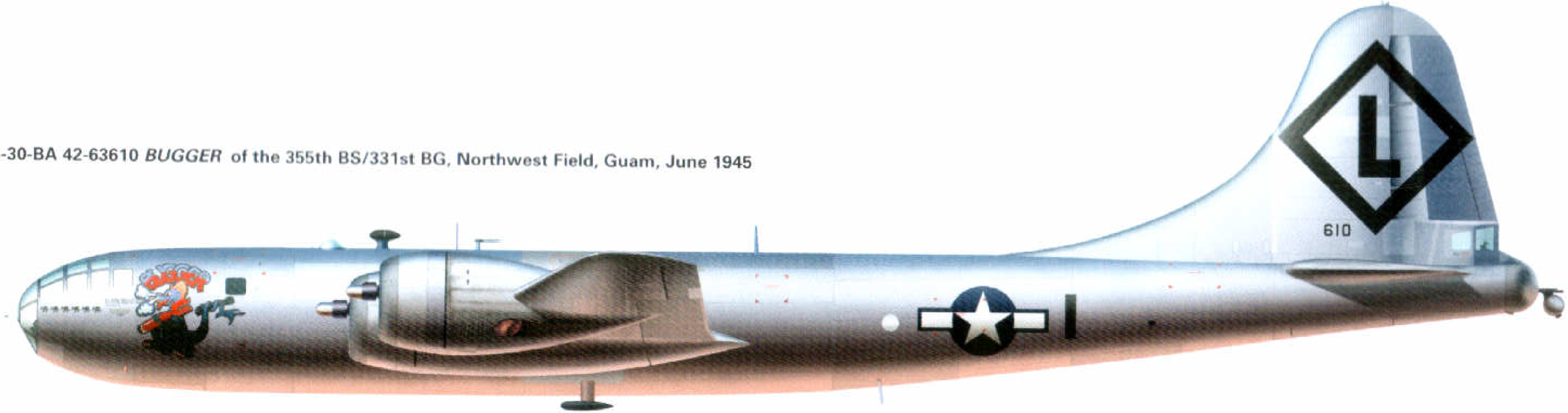

P
2
BATTLIN' BITCH II
CITY of MIAMI



34
B-29-60-BW 44-69800 *CITY of SAN FRANCISCO* of the 458th BS/330th BG, North Field, Guam, March 1945



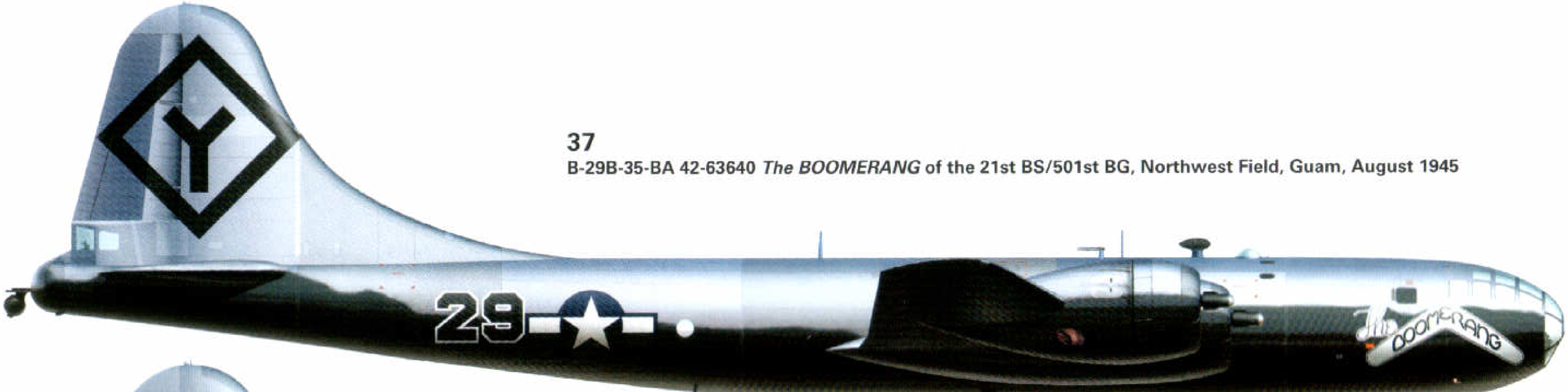
35
B-29B-35-BA 42-63688 *LOADED Dice* of the 15th BS/16th BG, North Field, Guam, April 1945



36
B-29B-30-BA 42-63610 *BUGGER* of the 355th BS/331st BG, Northwest Field, Guam, June 1945

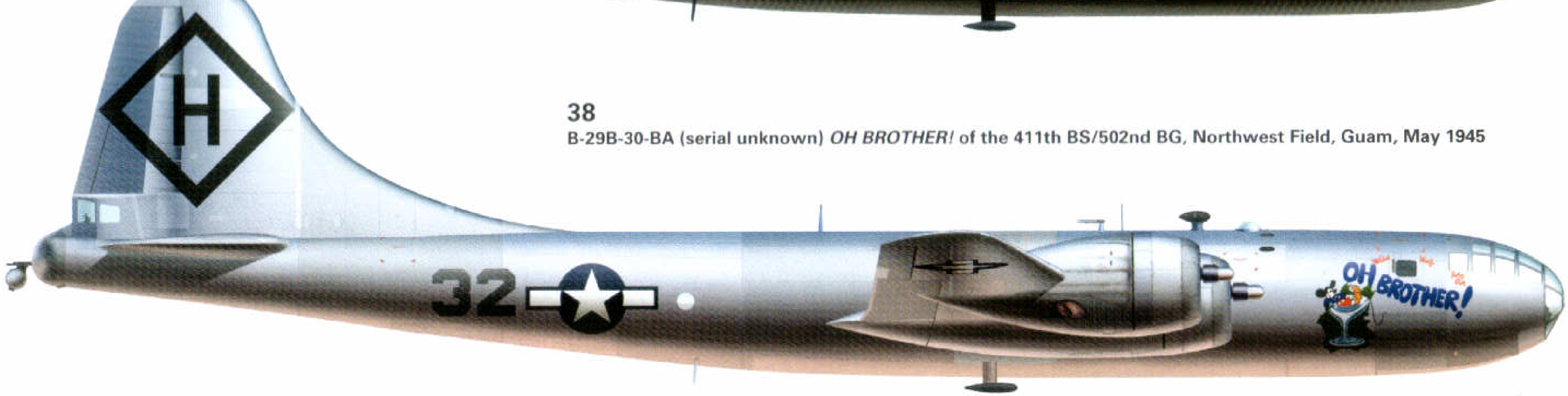
37

B-29B-35-BA 42-63640 *The BOOMERANG* of the 21st BS/501st BG, Northwest Field, Guam, August 1945


Y
29
The BOOMERANG

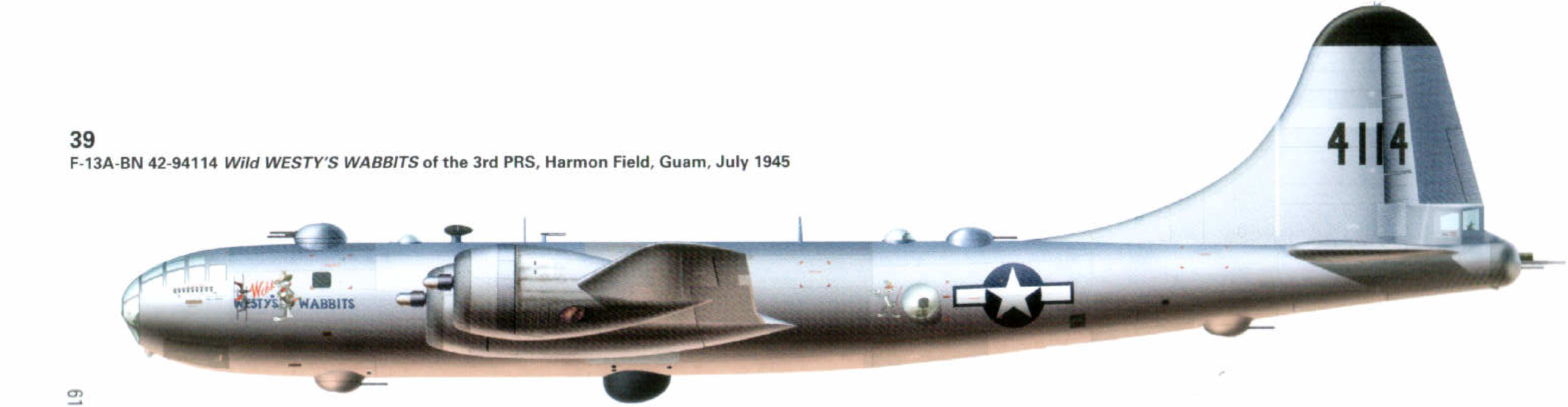
38

B-29B-30-BA (serial unknown) *OH BROTHER!* of the 411th BS/502nd BG, Northwest Field, Guam, May 1945

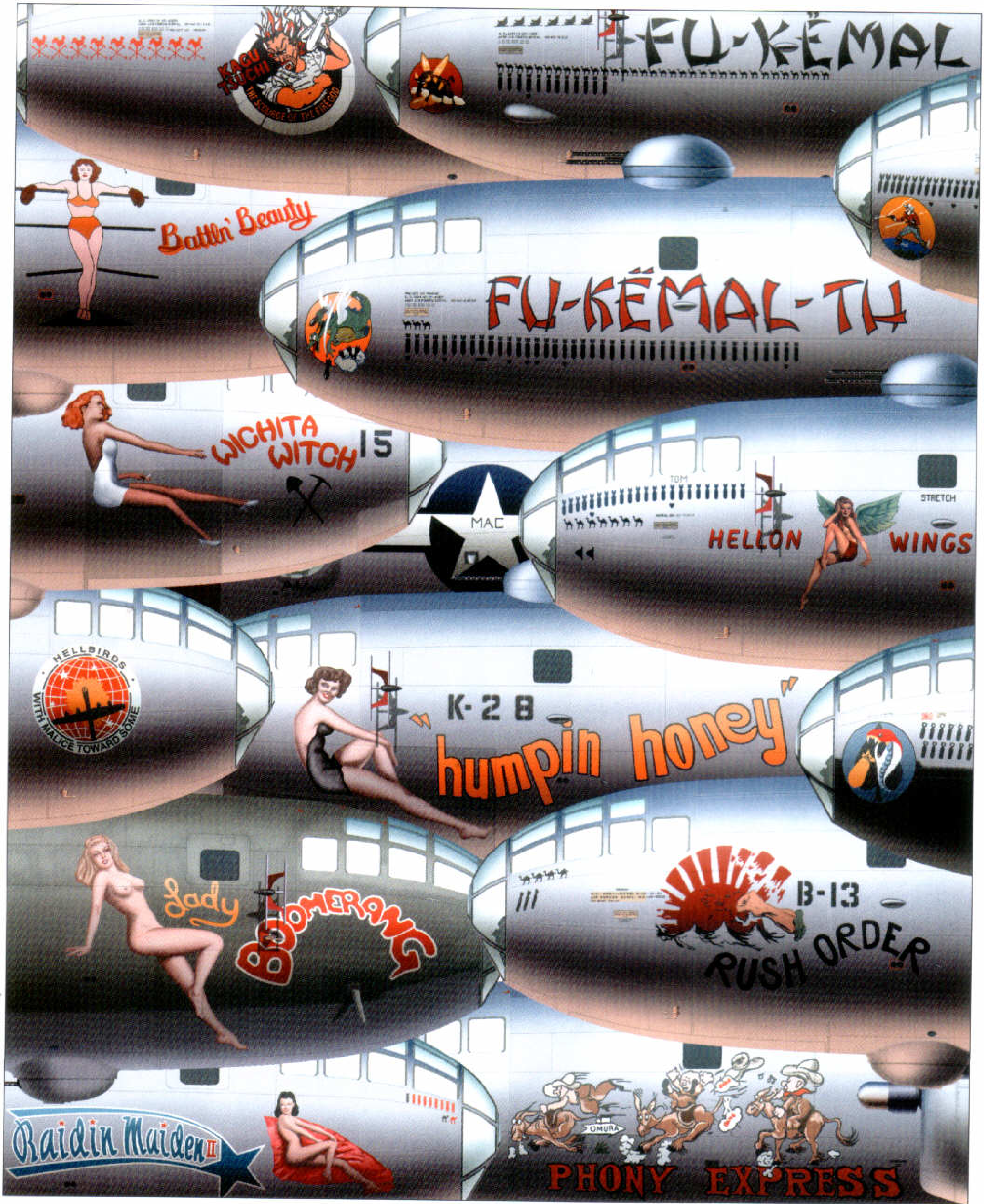

H
32
OH BROTHER!

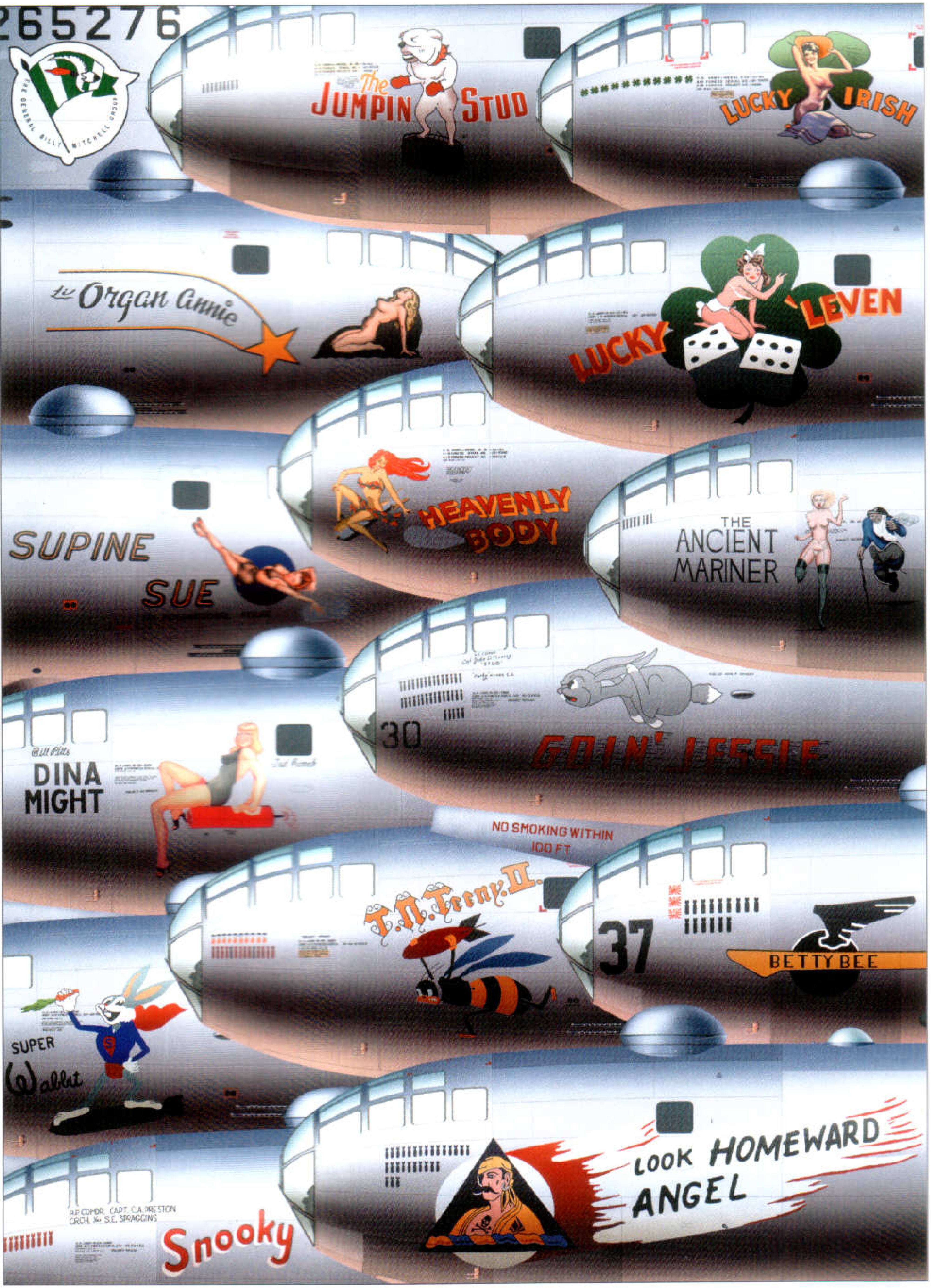
39

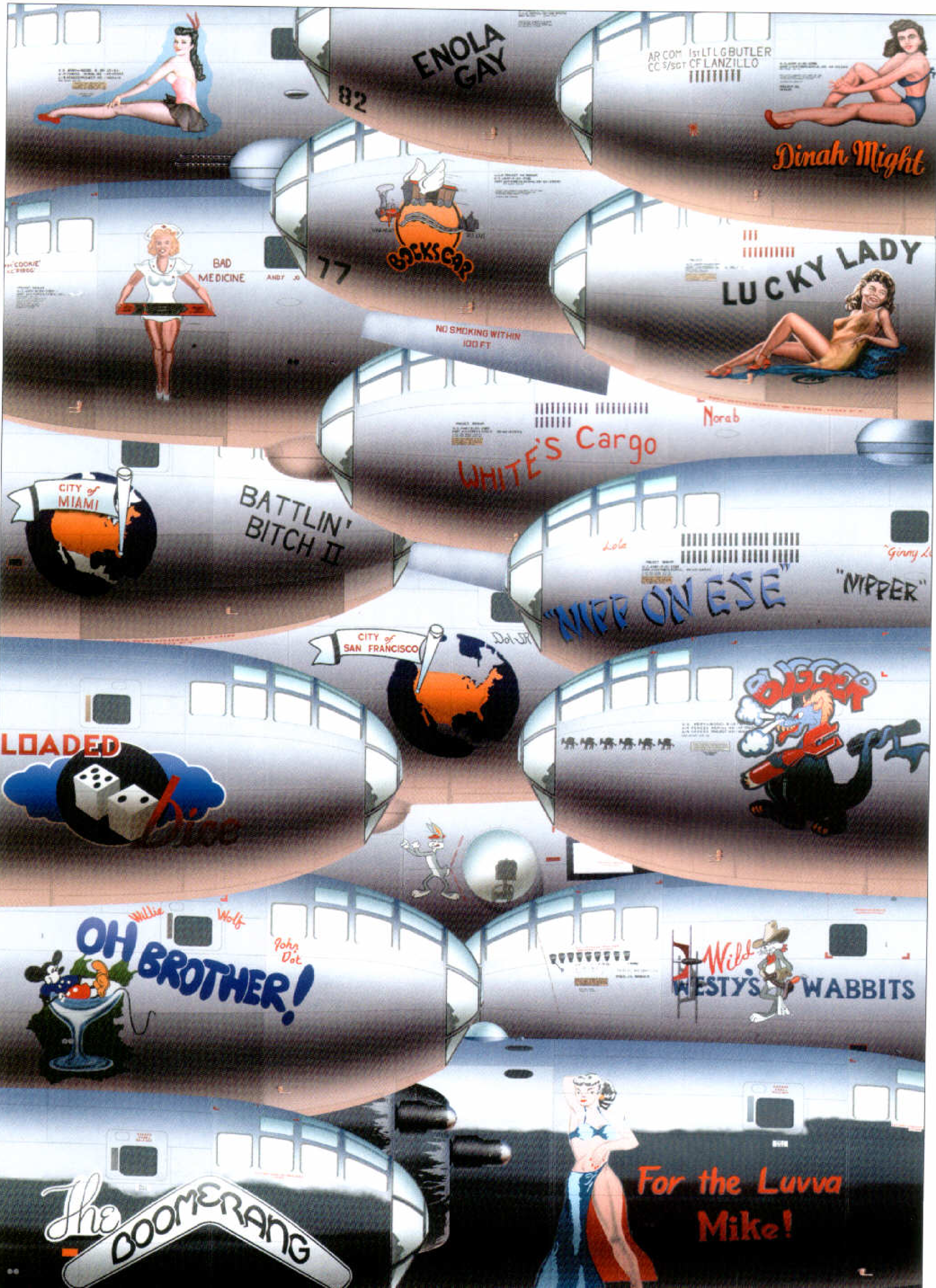
F-13A-BN 42-94114 *Wild WESTY'S WABBITS* of the 3rd PRS, Harmon Field, Guam, July 1945

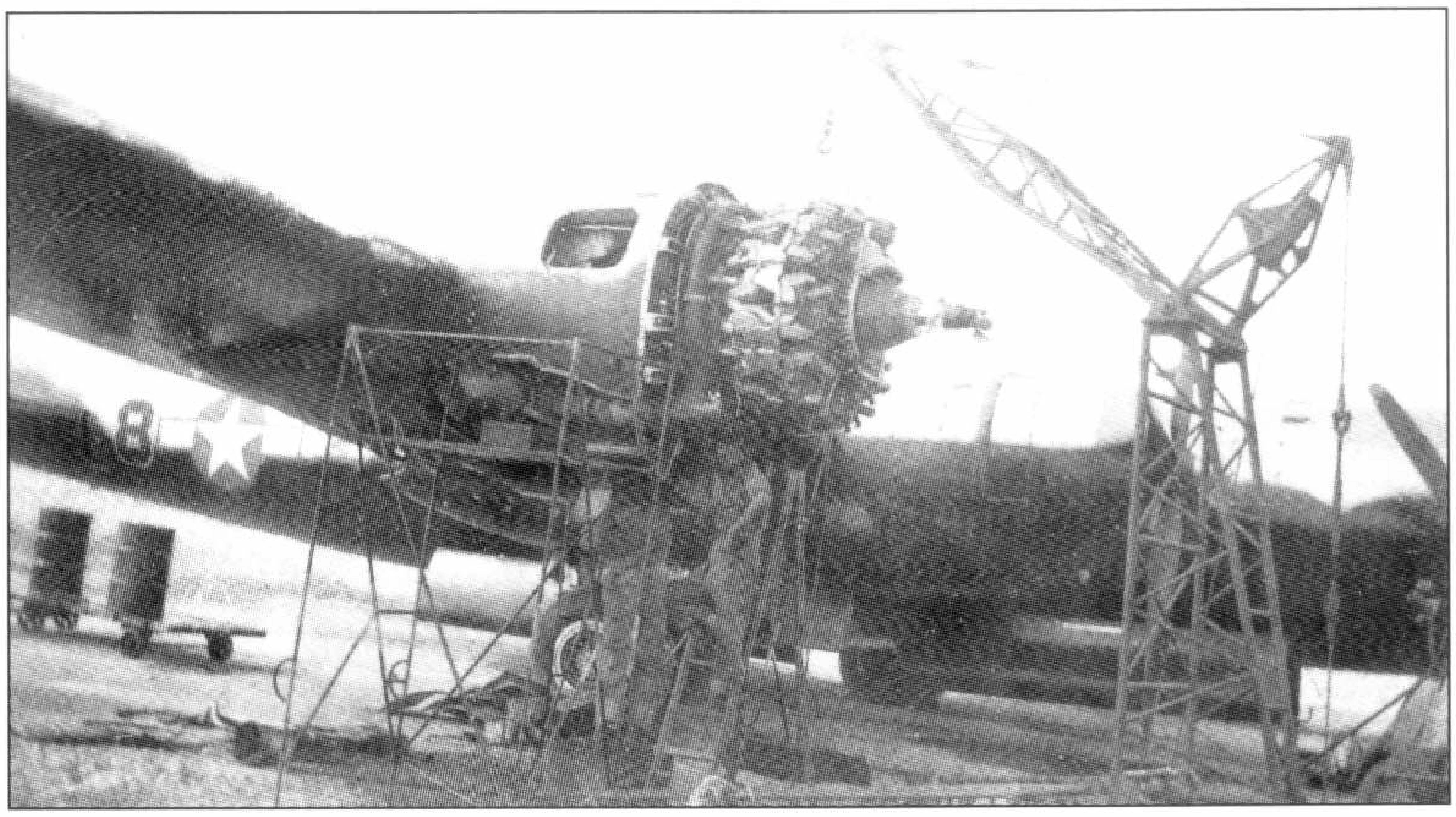

4114
Wild WESTY'S WABBITS

The 39 aircraft featured within the colour section of this volume have been selected in such a way that all B-29 bomb groups that saw action in World War 2 are represented in artwork. Almost all of the information supplied for the creation of these profiles has come directly from Superfortress crewmembers, or their relatives. This nose art section has been created so as to better illustrate the colourful artworks that adorned the B-29s in the colour section. Like the profiles, these scrap views have been produced following exhaustive cross-referencing with published bomb group histories and correspondence with surviving veterans.


KAGU TSUCHI
THE SCOURGE OF THE FIRE GOD
FU-KĔMAL
Battlin' Beauty
FU-KĔMAL-TH
WICHITA WITCH
15
MAC
TOM
STRETCH
HELL ON WINGS
HELLBIRDS
WITH MALICE TOWARD SOME
K-28
"humpin honey"
B-13
Lady
BOOMERANG
RUSH ORDER
Raidin Maiden II
OMURA
PHONY EXPRESS


265276
THE GENERAL BILLY MITCHELL GROUP
The JUMPIN STUD
LUCKY IRISH
Lil Organ Annie
LUCKY 'LEVEN
SUPINE SUE
HEAVENLY BODY
THE ANCIENT MARINER
30
GOIN' JESSIE
Bill Pitts
DINA MIGHT
NO SMOKING WITHIN 100 FT
T.N. Teeny II.
37
BETTY BEE
SUPER Wabbit
A.P. COMDR. CAPT. C.A. PRESTON
CR.CH. Sgt. S.E. SPRAGGINS
Snooky
LOOK HOMEWARD ANGEL


ENOLA GAY
82
AR COM 1st LT L G BUTLER
CC S/SGT C F LANZILLO
Dinah Might
BOCKSCAR
77
"COORIE"
BAD MEDICINE
ANDY
NO SMOKING WITHIN 100 FT
LUCKY LADY
Norab
WHITE'S Cargo
CITY of MIAMI
BATTLIN' BITCH II
Lola
"NIPP ON ESE"
"NIPPER"
CITY of SAN FRANCISCO
Dot-JR
BIGGER
LOADED Dice
Willie
Wolf
OH BROTHER!
John
Dot
Wild WESTY'S WABBITS
The BOOMERANG
For the Luvva Mike!



An engine change takes place in the open on a 502nd BG/315th BW Superfortress at Northwest Field, on Guam. Black undersides for night operation came along late in the war, and only a few B-29s were camouflaged. (*Earl Leonard*)

notice from the tower to start engines. Once a fire guard is standing by the No 1 engine, the aeroplane commander signals to start it up. The engineer will start No 1, and then watch rear and nose oil pressures. If they are normal he will report, "Oil pressures okay". The same procedure is used to start all engines, except the pilot takes over on the right engines. After the engines warm up, the engineer will do engine run up.

'Both pilots will observe their tachometers as each engine's magnetos are checked. The engineer will call out, "Left – both, then right", allowing enough time to see the full rpm (revolutions per minute) drop on each magneto. The engines are run at 2200 rpm for this check. Electrical system generator output is checked at 1500 rpm. The full power check will be made on the first third of the take-off run. The pilots and engineer refer to the pre-takeoff check list and notify the crew to prepare for take-off.

'Abort note – if any problem develops affecting safety or the ability of the aircraft to continue the mission, an abort crew is standing by off to the side of the active runway, and the pilot with trouble must expedite his taxy to the end of the runway, turn off and proceed to the abort area. The engines must not be stopped and the crew must not leave the aircraft while the OIC (officer in charge) checks out the problem with his experts. He is strictly in charge, and if the problem can be fixed it will be done forthwith. Then the crew goes back and tries again.

'1940 hrs Take-off – on signal from the tower, the pilot moves the aircraft out onto the runway and still rolling, applies full power. The engineer closely watches all of the engine instruments on his panel, and starts to close cowl flaps. He asks the scanners in the back, "Do you see anything abnormal?" "No", is the answer. There is no backfiring or overheating and the instruments are normal, so he reports, "Full power okay all engines". Of course the pilot knows he has four good ones working, but he must use all of the runway.

'The engineer will continue closing cowl flaps on all engines, while noting that the engines cylinder head temperature are still in the green. As the fully loaded aircraft clears the runway overrun, the pilot calls, "Gear up", then, "Climb power!" The Scanners report, "Gear coming up". The pilot sees an indication on his aisle stand panel confirming that the landing gear is up and locked. He then asks for, "Flaps". The scanners report flaps are slowly retracting. The engineer notes in his log that take-off power was on for two minutes. He asks the tail gunner to turn off the APU. Then referring to his flight plan, he estimates climb time to cruise altitude and calculates new gross weight to determine first cruise power.

'During the climb, and while the aircraft is not pressurised, the bombardier must remove the fuse pins from the bomb fuses. He will ask the left scanner to do the aft bomb-bay while he does the forward. When finished, the scanner will bring up his pins through the tunnel to the

Steve M Savko, flight engineer and mechanic, sits at the flight engineer's station in a B-29 during a mission over Japan. Savko, who had enlisted in 1940, served with the 398th BS/504th BG on Tinian. On 2 September 1945, he was lucky enough to participate in the largest formation flypast in history, when his B-29 passed over the formal surrender ceremony aboard the USS *Missouri* (BB-63) in Tokyo Bay. In later years, Savko served as a flight engineer aboard the B-36, B-50 and KC-97. (*Steve Savko*)

Although not of stunning quality, this photograph of a 502nd BG/ 315th BW Superfortress at Northwest Field, Guam, nevertheless reveals the plug (a circle with a window in its centre) fitted just forward of the AAF insignia that replaced the gunner's Plexiglas blister. The latecomer 315th BW flew most of its missions in B-29s that lacked all armament except the tail guns. Although the window was flush to the side of the fuselage, it allowed the scanner to see the landing gear, wing flaps and engine, and report their condition to the pilot via the intercom. (*Earl Leonard*)

bombardier, who must turn in all pins after the mission. Since the first cruise altitude is 10,000 ft (6096 m), the engineer pressurises the aircraft. The navigator must confirm winds with a drift meter, but tells the pilot to initially use the briefed course. The pilots set up the auto-pilot. Celestial navigation will be used during the entire mission by the navigator.

'Cruise Control – the engineer keeps a running log of power settings, fuel flow, fuel remaining, gross weight, outside air temperature, altitude and miles per gallon (usually about 0.6). Log entries are made every hour, or at every power change.

'Cruise control requires that the aircraft be operated at long-range airspeeds, which becomes slower as the aircraft lightens due to fuel burn or bombs dropped. The lighter the aircraft becomes, the less power is required. The engineer must also start transferring fuel from the centre wing tank to wing tanks behind each engine no later than two hours after take-off, and be completed before the climb to bombing altitude. This ensures that all fuel had been transferred before combat, and reduces wing bending load from the fuselage. No smoking is allowed during fuel transfer.

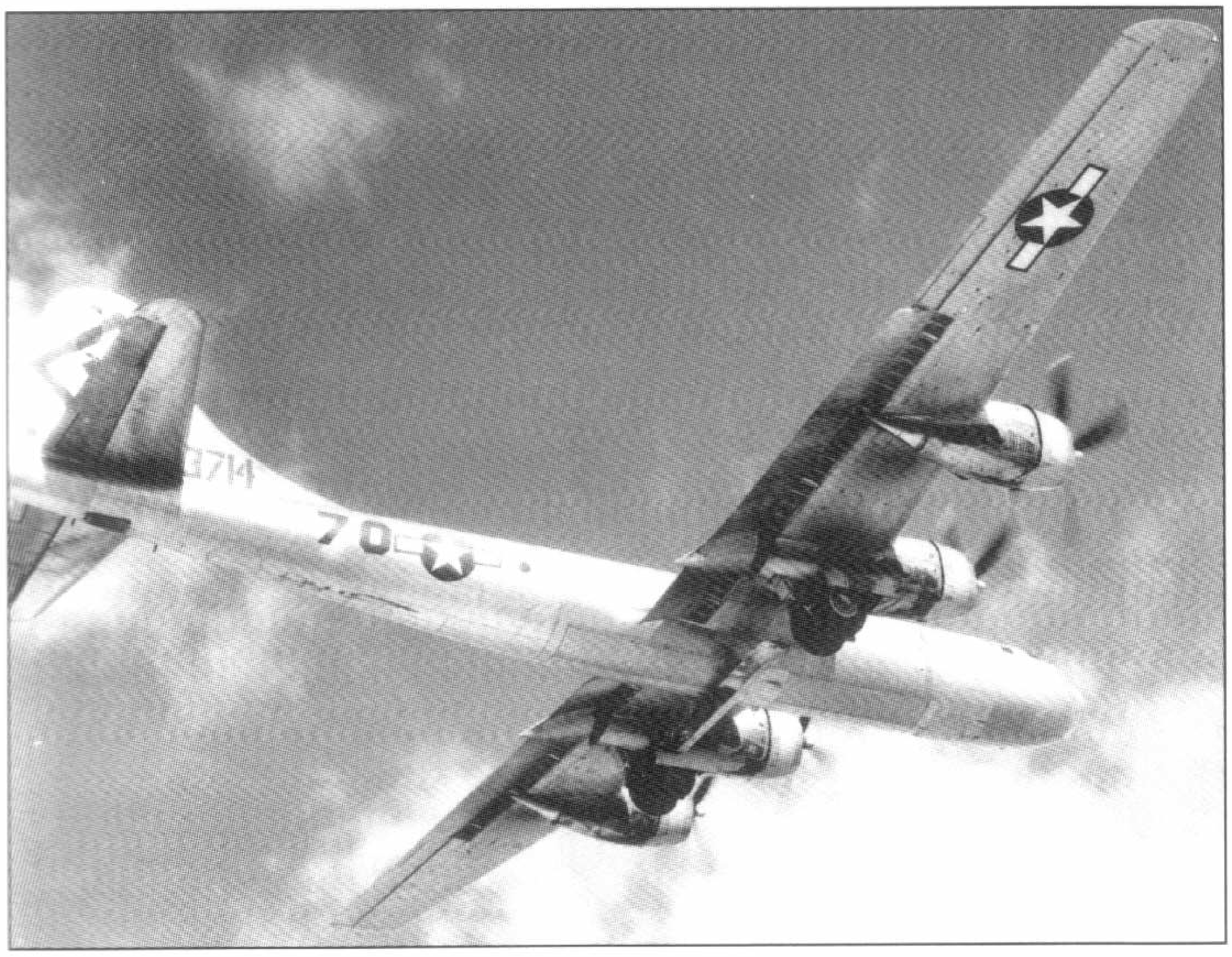
'Other crew members functions:

'Radio operator – he must monitor certain frequencies during the entire mission. And after bombs away, he sends a coded strike message to base. His secondary job is the crew medic, and he has had considerable first aid training. He also has a medical kit.

'The scanners and tail gunner – they are the eyes and ears of the back of the aeroplane. The tail gunner is the only person on board who has an unrestricted view behind us. He gets to try his guns on every mission, but so far he has had no targets. We have enemy spotter aeroplanes over Japan way off our wingtip, but out of range. The scanners each have a small window to observe the landing gear, flaps and engines on their sides, and an Aldis lamp to help at night. They report to the flight deck on the operation of the landing gear and wing flaps.

'The scanners can also help the engineer operate the flaps and/or landing gear in an emergency using the actuator mounted in the aft bomb-bay or the manual crank. The right Scanner also turns on and off our IFF (identification friend or foe) "rooster" transmitter. It is turned on prior to take-off and confirmed to be working.

'In this regard, on our last mission we were somewhere north of Iwo Jima and suddenly the pilot, monitoring the required VHF frequency, heard "This is Admiral so-and-so, Task Force so-and-so. All US planes receiving this message execute a 180-degree turn now". He repeated the order, adding, "We are having some IFF trouble". We turned around. In a minute or so he came on a again. "Resume course, Thank you". That is a small incident that shows the extent of the Navy presence in the waters around Japan at this time.



Manufactured by Bell in Atlanta, B-29B-BA 42-63714 served with the 501st BG/315th BW. Photographed climbing out from Guam's Northwest Field, this underside view of the bomber reveals the antenna for the AN/APQ-13 Eagle ground-scanning radar, mounted beneath the fuselage at the wing juncture. This system made its combat debut with the 315th BW in the Pacific theatre late in the war. (*via Frank MacSorley*)

'As we approach the Japanese Empire, the navigator tells the aeroplane commander, "Climb point in three minutes". I note in my log the time we set up climb power, and notify the pilot that fuel transfer has been completed. Now the right scanner reports a torching turbo on No 3 inboard.

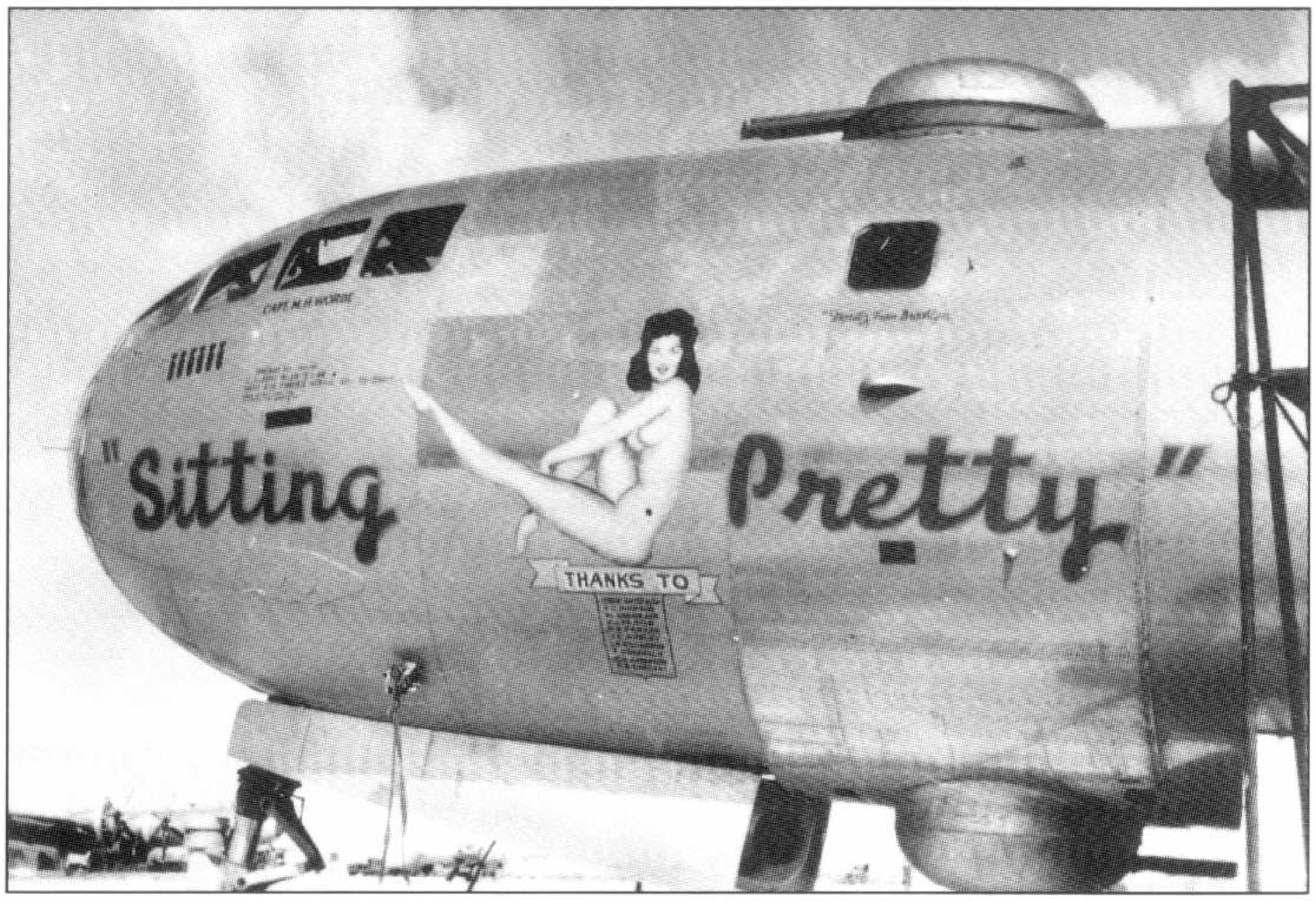
'The engine installation has two turbo superchargers mounted vertically, one inboard and one outboard. I'm not sure exactly what action we took then, but I do remember that we had to reduce exhaust back pressure. So I would have had to get up and say "I want to turn down the turbo boost control slightly which affects all engines", then nudge the throttles on all engines to get power back to where it was. The turbo boost selector is on the aisle stand. This would give better exhaust scavenging and more complete combustion in the engine. I think the aircraft commander wanted to feather the engine, go over the target on three, then unfeather it on our way back to base. I know we didn't feather any engine on this mission, so the scanner must have reported it as okay.

'After we reach bombing altitude, the aeroplane commander orders the engineer to depressurise the aircraft and for all crew members to put on oxygen masks and goggles, and get ready for the bombing run. I peek around to look forward and the world looks on fire. There are searchlights and what look like orange and green flak bursts. Someone says, "Phosphorus".

'The pilots and bombardier have identified the aircraft in front of us as a B-29. The tail gunner reports we also have one behind us. The aeroplane commander asks for more power to close in behind the aeroplane in front of us so as to form a single file bomber stream as we approach the initial point (IP) The left scanner reports an unwelcome visitor way off to the left and then we have more searchlights.

'We were told in our indoctrination that three searchlights are bad, but four are deadly. So the aeroplane commander asks the tail gunner to turn on the chaff dispenser. As it starts working the lights seem to just be moving around. Our aircraft are all painted black on the underside, but with so much ambient light from the fire it's not much help. Chaff is a certain length aluminium foil, which is helping to disrupt their radar-controlled lights. We will use it again on the bomb run.

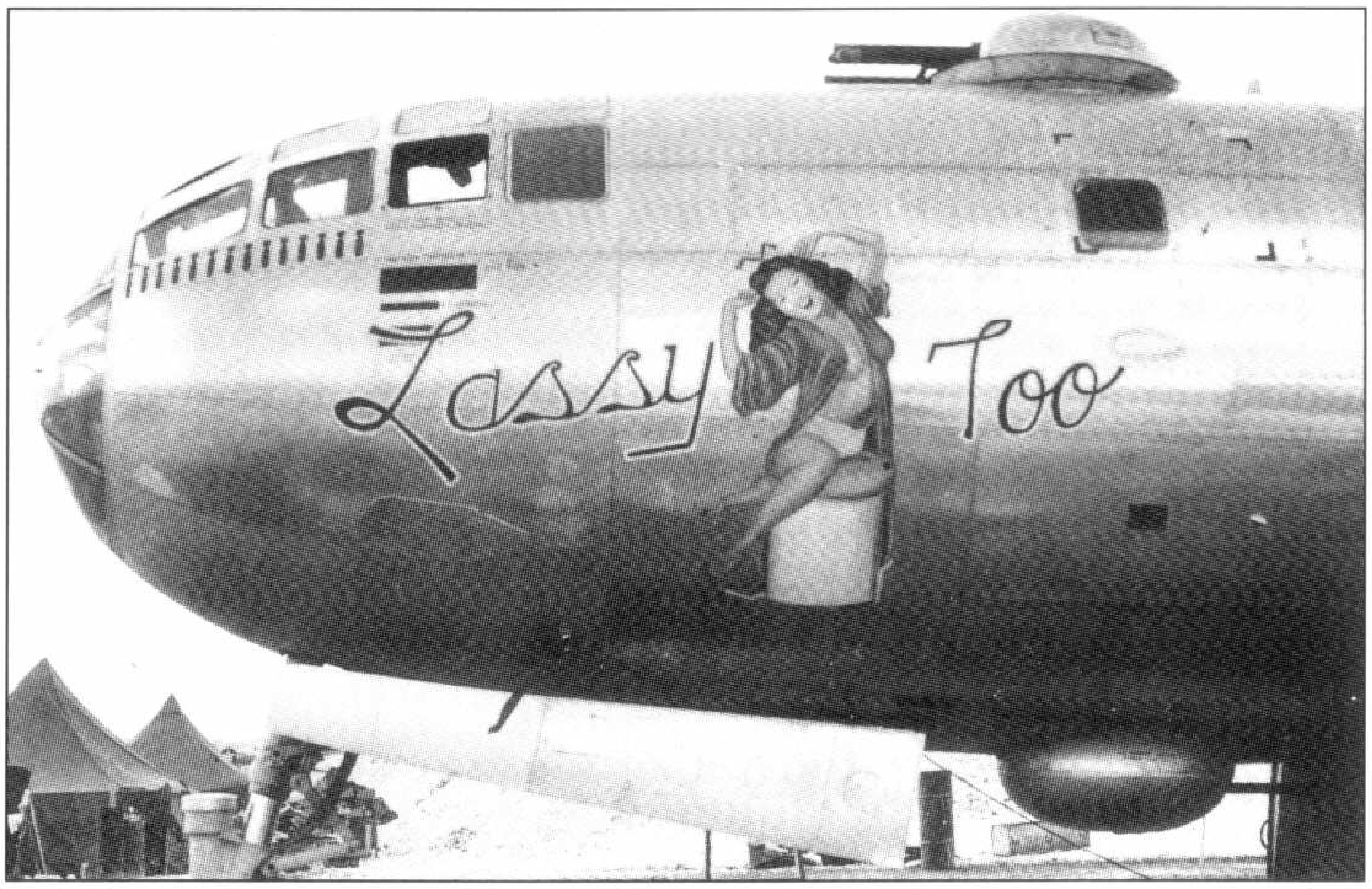
'At the IP the aeroplane commander turns the aircraft over to the radar operator and the bombardier. The radar operator steers the aircraft with a remote knob of the auto-pilot toward the aiming point. The pilot handles the throttles to maintain a constant speed. The bombardier follows the radar operator through on his bombsight. The engineer has a side window to look out, and the light from the great fire below seems brighter. All he can do is sit there riding backward, watching his instruments and be ready



Adorned with a most presentable female form, *"Sitting Pretty"* (Wichita-built B-29-50-BW Superfortress 42-24814) also wore the hull number K-237, not shown here. The bomber departed the United States for the war zone on 2 January 1945, where it was assigned to the 504th BG/315th BW. Photographed at Northwest Field, on Guam, by Navy Seabee Martin Gubba, the aircraft survived the war with a tally of 18 combat missions. It returned to the US and remained in the air force inventory until 1953. (*Gary M Gubba*)

to perform any emergency procedure that he knows.

'About then the B-29 in front of us explodes. I peek around my flak curtain and hear the bombardier say, "It's all glowing red". Then he puts his eyes back on the bombsight. First there is a thud as the pneumatically operated bomb-bay doors open, then "click-click-click" over the interphone as the bombs leave and suddenly the aircraft increasingly rises as more and more bombs fall away, then another thud as the bomb-bay doors close.



Bell-manufactured B-29-20-BA 42-93984 *Lassy Too* was one of two Superfortresses to bear this name. Having commenced its combat career in the China–Burma–India Theatre with the 468th BG/58th BW, the bomber was later transferred to Tinian, and the 504th BG/315th BW. Like *"Sitting Pretty"*, this bomber was returned to the US and remained in the inventory until 1953. (*Gary M Gubba*)

'The aircraft commander quickly disengages the auto-pilot, grabs the controls and puts the B-29 into a steep banking turn away from the target, asking for full rated power – all simultaneously it seems. Now the tail gunner has a view he will never forget of the raging inferno. The aircraft commander directs the radio operator to send his coded strike message to base.

'As we exit the target area we are aware that an ECM (electronic counter measure) aircraft from our wing may have been circling the target area, jamming the anti-aircraft control radar, and we're thankful, but the pilot says he thought some of the flak was still pretty accurate. We have an ECM aircraft in our squadron, but it is not yet been fully converted. The navigator gives the pilot the next course change and the engineer sets up the descent power setting. The cruise altitude back to base is usually set at 8000 ft.

'One of the XXI Bomber Command modifications made on all B-29s as they arrive from the States is the replacement of oil dilution switches on the engineer's switch panel with propeller double throw control switches. Thus the engineer can make the necessary power adjustments for long–range cruise control and the aeroplane commander is aware of this. We still have over six hours of ocean to cover.

'The navigator must check the course occasionally and have minor corrections made, but the rest of the crew will do a little napping. Some will even crawl into the tunnel to stretch out. The radio operator must still monitor required frequencies. And as the power is reduced, some minor trim on the elevator control of the auto-pilot by a pilot will be necessary – at times the engineer has been known to do this. As we get closer to the Marianas we set the radio compass to the local radio station.

'Food – most of the crew will eat K-rations and/or candy bars from the PX. Some of us might have some mess hall coffee. It is not the greatest, just hot. Remember back then the eggs were powered, and so was the milk. The tail gunner is the only one eating Spam sandwiches from the Mess. He stays back there in his position most of the time, awake and looking at the ocean or something. He is the only one who can go the trip without using the toilet.

'Toilet – there are no relief tubes on the B-29, even for the tail gunner. His position is pressurised by a duct from the aft cabin. He has a valve to depressurise so he can get out, but no relief tube. So there is a bucket with a lid and a removable liner usually located in the aft pressurised compartment. The rules are that the first user has to empty it. Most of us can wait a long time, but not 14 hours. I think it was the same crew member who finally had to go every time – he was an "old man" of 29 then.

'For the last two hours of the flight the engines' RPM is set at 1400 RPM. It can go lower and still drive the generators, but we are light. I check the fuel tank liquidometers (gauges), and they show we have about 1100 gallons total. My log says 1170. In a 20 degree nose-down attitude the aeroplane traps about 740 gallons of fuel. If we had less fuel, the engineer would transfer more to the outboard tanks since they trap less. But we've never had to hold before landing with three runways at our base, so I won't move any fuel. The pilot says okay.

'Using the radio compass set to an invisible intersection called Margo or something like that, the pilots know exactly where they are when that intersection is crossed, the radio compass does a 180, and they then call Northwest Field Tower for landing. Marianas Control is also contacted. The tail gunner is asked to start the APU, the aeroplane commander orders "Prepare to land checklist", and power is set to 2400 RPM, then landing gear. As the gear comes down, the scanners are asked if the tyres look okay.

'We really didn't know if we had any damage, but they see no damage when they report they're down and locked. Pilot reports three green lights on the aisle stand. Then he asks for half flaps, and when we turn on final, full flaps. On touch down, the engineer opens the cowl flaps for the runway roll-out. We usually stop somewhere it is clear, taxying in and making a magneto check on all engines so any excessive drop can be noted on the form 1-A. But everything seems fine. At the hardstand the engines are cut and landing gear lock pins are handed down to the groundcrew. Would the crew chief like the putt-putt left on? He says yes, so we have to move the aeroplane around.

'The engineer must fill out the Form One with all crew member names, and he notes that the time is 0945 hrs. That makes the mission duration 14 hours and 5 minutes. He finishes his log before he exits the aeroplane with the rest of the crew. Sat back in a weapons carrier, we go directly to debriefing and critique, in a tent. The Red Cross girls are there with donuts and coffee. I take three donuts with coffee, and as we go in the flight surgeon orders us to take a shot of bourbon.'

The anti-petroleum effort by the 315th BW continued on the night of 28–29 July, when 76 Superfortresses assaulted the Shimotsu refinery. Before the end of hostilities, the nocturnal raids by the wing's B-29s, with their Eagle radars, also torched the Mitsubishi and Hayama refineries at Kawasaki and the Nippon refinery at Amagasaki.

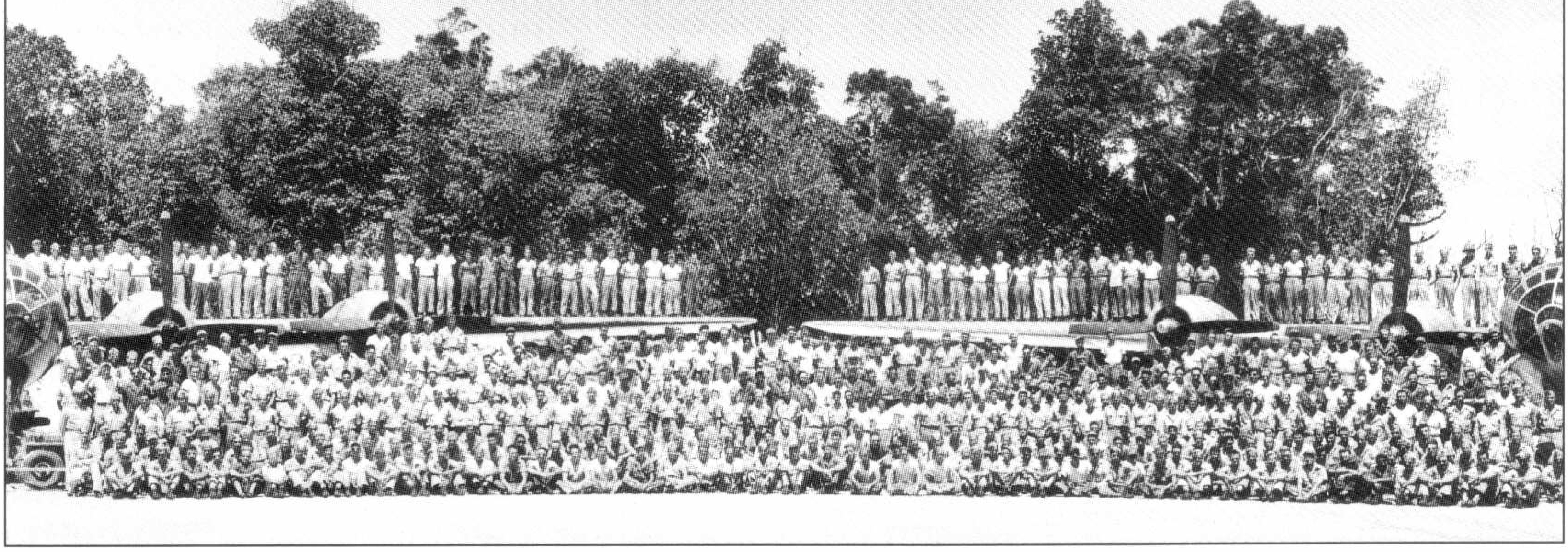
The wing's final mission came on the night of 14–15 August – the war's final night of fighting – when 315th BW Superfortresses journeyed to the Nippon oil facility at Tsuchizaki. This curtain call for the 315th was one of the longest missions ever flown by Pacific-based B-29s – a distance of 3745 miles (6030 km). Some 141 Superfortresses launched, led by bombers from the 502nd BG, and an impressive 132 reached the primary and dropped on it. A dozen fuel-starved Superfortresses had to put down on Iwo Jima on the way home, but none was lost in battle.

COMMAND CHANGE

On 16 July, an important change took place when the redundant XXI Bomber Command went out of existence, and Twentieth Air Force was shifted from Washington to Guam. Now, Gen LeMay was the Twentieth's commander, and, as before, his outfit operated independently of Gen MacArthur and Adm Nimitz. Still at a relatively junior rank, Curtis LeMay was now at the helm of the most powerful striking force ever assembled.

Though it went unannounced, 16 July also saw US scientists detonate the first atomic device in the New Mexico desert. The 18.6-kiloton, tower-mounted device (equivalent in destructive power to 18,600 lb (8436 kg) of TNT) was a ball-shaped, early version of the 'Fat Man' plutonium bomb later dropped on Nagasaki (the wholly different, gun-type uranium bomb dropped on Hiroshima, known as the 'Little Boy', was never tested in advance).

The detonation at New Mexico's Trinity site had an indelible impact on Manhattan Project boss Maj Gen Leslie Groves and his scientists. The best-known reaction is from chief scientist J Robert Oppenheimer, who quoted a Hindu text. 'Now I am become death, the destroyer of worlds'. On a more practical note, sensing that the new weapon meant



Yes, there are trees on Guam. A patient photographer succeeded in getting half of the maintenance men from the 16th BG at North Field to pose between a pair of B-29s for this official shot. With this image safely 'in the can', these men made way for the group's remaining 'ground pounders', and a second photograph was exposed

uncertainty for mankind, Trinity director Kenneth Bainbridge said, 'Now we are all sons of bitches'.

TIBBETS ON TINIAN

In June a new unit starting arriving at North Field on Tinian – the 509th CG, with its modified B-29s (as well as a squadron of C-54 Skymasters). 509th CG commander Col Paul Tibbets was assigned to the 313th BW, and he set up a mostly independent outfit. Members of other groups within the 313th began to observe the newcomers flying small, seemingly ineffectual 'milk runs' to easy targets, the crews familiarising themselves with weather and conditions in Japan. Unaware of the Trinity site test, or of anything else to do with the US's new secret weapon, some B-29 crews seethed with resentment. It seemed that Tibbets's boys were having an all-too-easy war, while everybody else was going to the dangerous targets.

The 509th had 15 *Silverplate* B-29s, all from the Glenn L Martin factory in Omaha, Nebraska. All had been stripped of turrets and armour plating, except for the tail gunner's position. All had fuel-injected engines and new technology reversible-pitch propellers. The bomb-bay of each Superfortress had been re-configured to suspend, from a single point, a weight of 10,000 lbs (4535 kg). A lot of work had gone into forming and training the 509th CG, and the aircraft were kept in top-notch condition – but no one could deny that the razzing from the members of other bomb groups was taking its toll.

Most members of the 509th still did not know why they were on Tinian, or why they were sitting out the big missions being flown by hundreds of B-29s. One pilot, Capt Robert Lewis, was more than upset. Exercising his role as CO, Tibbets appropriated Lewis's B-29 (44-86292), and it became the *ENOLA GAY*, named for the colonel's mother.

When they first arrived in the Pacific, the B-29s of the 509th wore a tail marking designed for their special unit consisting of a forward-pointing arrowhead enclosed in a circle, both in black, on the fin. When they began flying over Japan, Tibbets's bombers took on bogus markings from other units. *ENOLA GAY*, for example, wore the circle R of the 6th BG.

Soon to become the most famous B-29 of them all, 44-86292 had arrived on Guam from the US on 6 July. After technicians completed additional modifications to it, the bomber was flown from Guam to Tinian. The aircraft and its crew began formal training in the combat zone on 12 July.

On the night of 5 August, only hours after Tibbets had christened the bomber, groundcrews began loading the 'Little Boy' weapon aboard *ENOLA GAY*. Not really little at all, but actually ten feet (3 m) long, with a 28-inch (0.9-m) diameter belly, the 'Little Boy' would slip into the bomb-bay with just two inches to spare.

The pre-dawn mission involved a number of other 509th B-29s. Besides the *ENOLA GAY*, six aircraft were to participate in the raid. Three were weather aircraft, despatched ahead of the others – *STRAIGHT FLUSH*, commanded by Claude Eatherly, would be on her way to Hiroshima; *JABBITT III*, with John Wilson in charge, would fly to Kokura; and *FULL HOUSE*, piloted by Ralph Taylor, would head for Nagasaki. Hiroshima was the primary target, but if clouds prevented visual sighting of landmarks around the city, Kokura and Nagasaki were

ENOLA GAY
82

Standing with his hands on his hips, smoking his pipe, Col Paul Tibbets, CO of the 509th CG and pilot of the *ENOLA GAY* on the Hiroshima raid, poses with members of the groundcrew who worked on his B-29. (AAF)

potential alternate targets for the 509th CG.

Charles Sweeney's *THE GREAT ARTISTE* and George Marquart's unnamed aircraft No 91 carried cameras and special instrumentation, and were to escort the *ENOLA GAY* to its target. The seventh and final aircraft to take-off would be *TOP SECRET*, piloted by Chuck McKnight. He was to fly only as far as Iwo Jima, and stand by as needed.

At 0200 hrs on 6 August, *ENOLA GAY* took off from Tinian with its unique cargo. Two observation B-29s carrying cameras and scientific instruments followed in the bomber's wake.

Tibbets piloted and commanded the *ENOLA GAY* but it was another man, weaponeer and Navy Capt William S 'Deak' Parsons, who can be considered the leader of the world's first atomic bomb run. Parsons began his day by ignoring the orders from Groves, who had specifically forbidden the mid-air arming of the bomb, saying it was too dangerous. Parsons, who had seen countless B-29s crash on take-off since taking up residence with the 509th, felt that if he armed the weapon on the ground, and the *ENOLA GAY* suffered the slightest mishap, the mission would end in disaster for the Manhattan project, and death for thousands of sailors and airmen on Tinian.

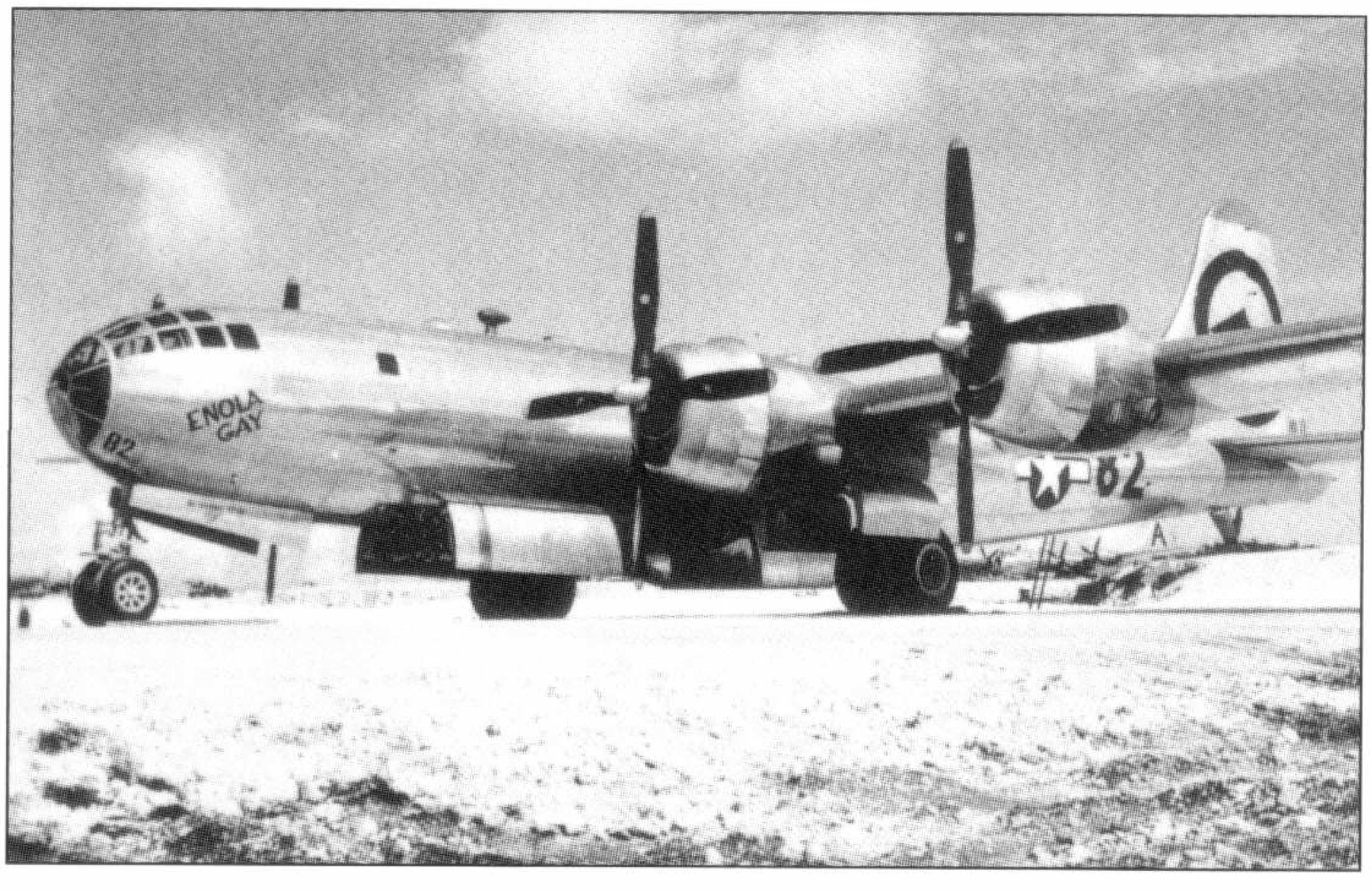
At 0300 hrs, with the *ENOLA GAY* safely thousands of feet up and hundreds of miles away, Parsons began carefully inserting the explosive charge that gave the 'Little Boy' its teeth. Early in the process, he cut his finger badly on the sharply machined edges of the bomb's tail. There was now blood on Parsons' clothing, and on the bomb.

At 0700 hrs, Japanese radar detected aircraft heading toward Japan, and broadcast the alert throughout the Hiroshima area. Soon afterwards a weather B-29 circled over the city. At 0809 hrs the crew of the *ENOLA GAY* saw the city appear below. The target was the T-shaped Aioi Bridge that was located in the heart of Hiroshima.

At 0815 hrs, bombardier 1Lt Thomas W Ferebee – who did not know what kind of ordnance he was dropping – released the 'Little Boy'. The detonation occurred near the central section of the city, and the crew of the *ENOLA GAY* saw a column of smoke rising fast, and intense fires springing up.

'Little Boy' detonated at a height of some 1800 ft (550 m) above

The most famous Superfortress of them all, Martin-built B-29-35-MO 44-86292 of the 509th CG, otherwise known as the *ENOLA GAY*. The arrowhead inside the circle on the fin is the genuine group marking, the bomber being so attired when it arrived on Tinian (although without a name at that point). During its historic mission over Hiroshima, the *ENOLA GAY* wore the standard letter 'R' inside a circle which adorned all other B-29s serving with the 6th BG. (*Chester Marshall*)



Hiroshima – an altitude calculated to make the most of the blast effect. No fewer than 70,000 people, including some American PoWs, died that very day, while 60,000 buildings out of Hiroshima's total of 90,000 were completely destroyed. The yield was approximately 15 kilotons, or equivalent to 15,000 tons of TNT.

NAGASAKI

If the bombing of Hiroshima went flawlessly, the second atomic bomb mission turned into a fiasco.

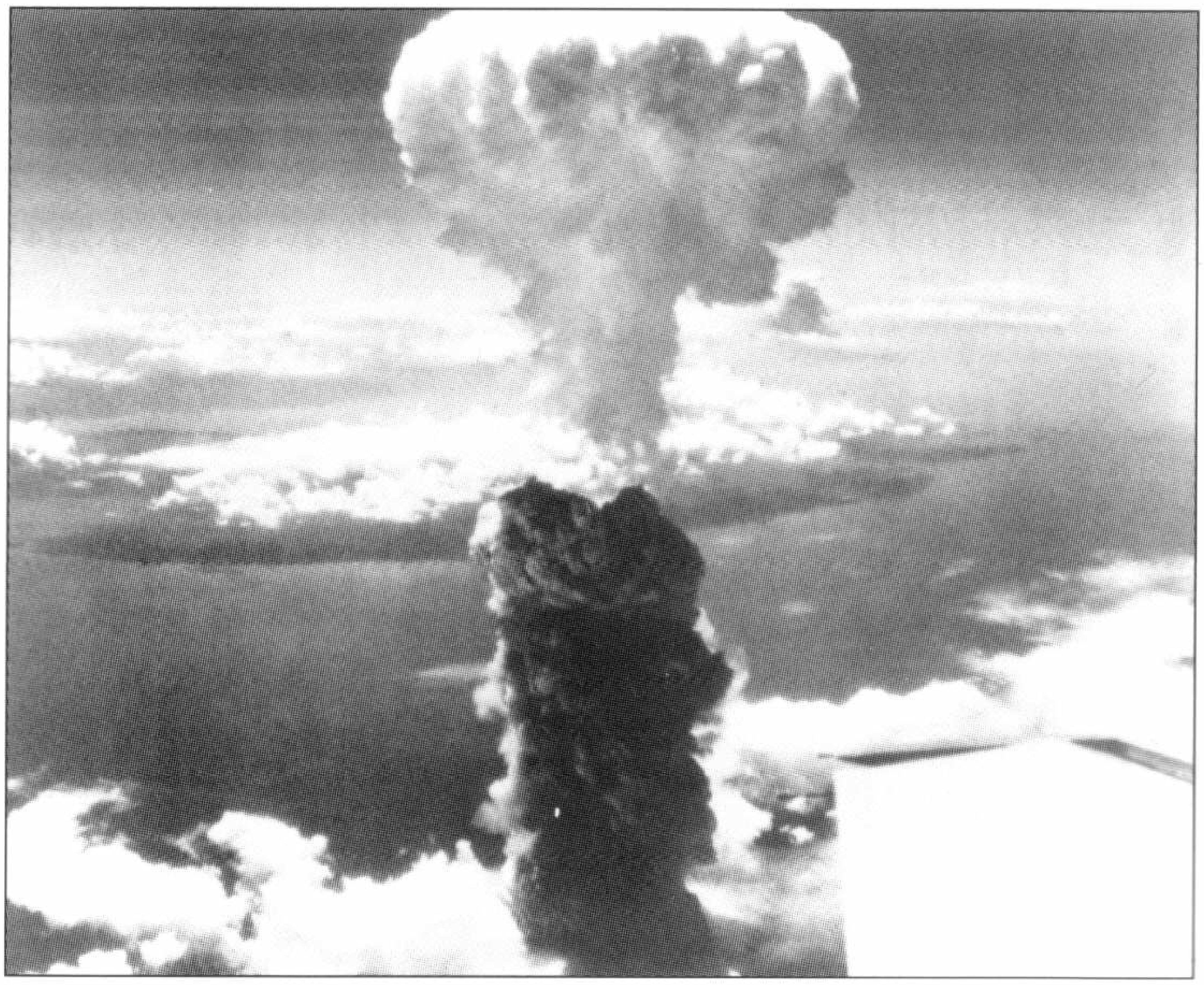
Early on 9 August, Maj Charles W Sweeney took off from Tinian at the controls of B-29-35-MO 44-27297 *BOCKS CAR*, carrying the 'Fat Man' weapon. Sweeney had commandeered Capt Frederick C Bock's bomber, while Bock himself was an observer at the controls of Sweeney's bomber, B-29-35-MO 44-27353 *THE GREAT ARTISTE*.

Sweeney pressed on with the mission, even though *BOCKS CAR* had a fuel system problem that made a portion of its fuel supply unavailable to the crew. The fuel problem should have meant an immediate abort. But to cancel the take-off, or to return the 'Fat Man' to Tinian after take-off, would have required the disassembly of the bomb to allow the recharging of batteries within the device, and this job would have taken about three days to complete. The batteries required recharging every three days, and after nine days from the start of assembly, they would have to be replaced.

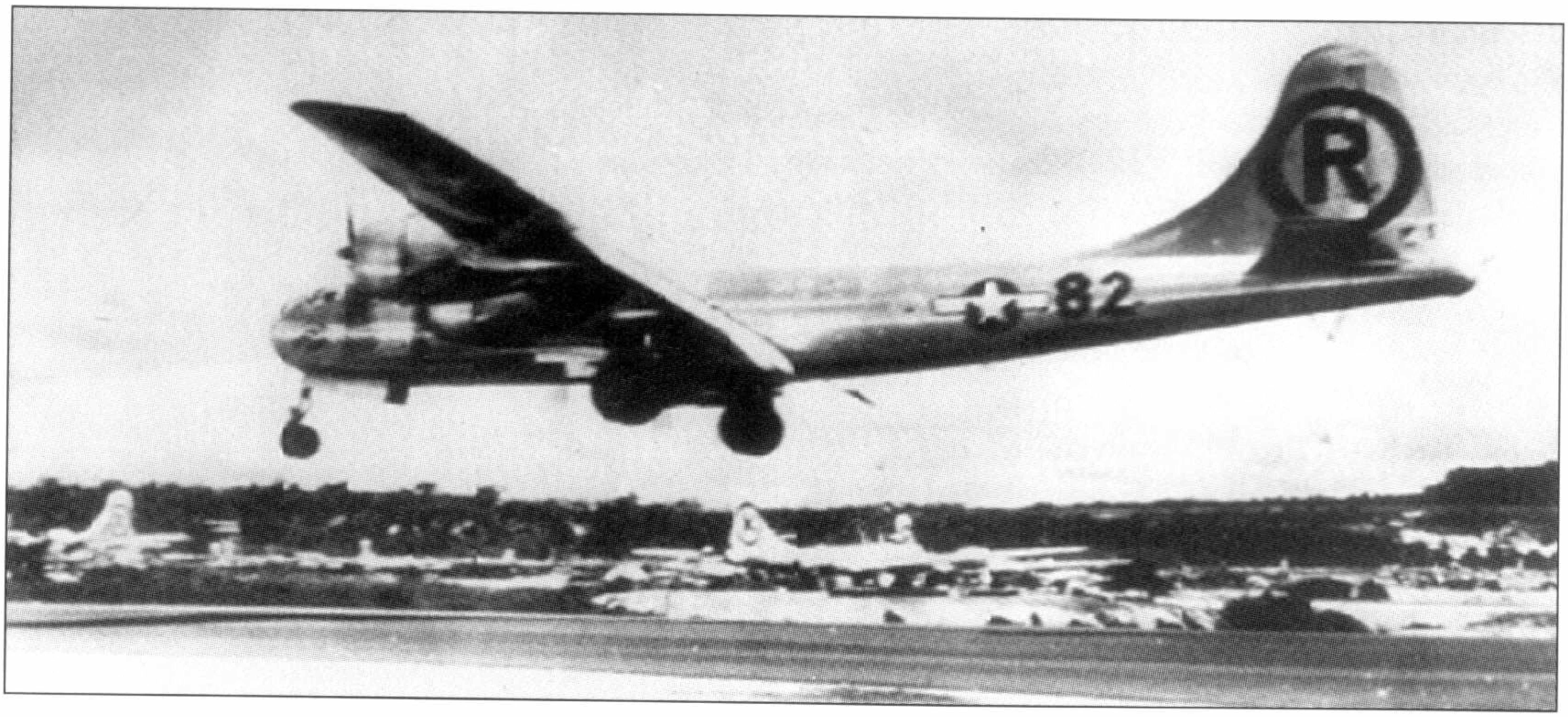
The arming device could only be left in the bomb for about ten days from start of assembly before heating caused degradation of the high-explosive lenses, and there was no other usable set of HE lenses available on Tinian. Of course, the bomb could have been dropped into the ocean, but construction of the 'Fat Man' had taken a crew of 40–50 men three years to accomplish. So the Manhattan Project, and the 509th CG, would face serious problems if Sweeney could not drop the bomb as planned on 9 August.

So *BOCKS CAR* proceeded towards its primary target – the great industrial city of Kokura, its crew possibly, or possibly not, remembering that the rules required a visual drop. They had been sternly warned not to drop an atomic bomb by radar. The stakes were too high. What almost no one knew – fortunately, least of all the Japanese – was that, for now at least, there was no third atomic bomb. One additional bomb had reached Tinian, but key components within the third device had been damaged in transit and could not be repaired. There was no fourth bomb, anywhere, not on Tinian and not in the US

Visual conditions did not exist at Kokura. The city was obscured by smoke, much of it left over from a nearby B-29 mission of a day earlier. Unable to see the bombing point,



The atomic cloud rises past 20,000 ft (6096 m) over Hiroshima on the morning of 6 August 1945. Escorted by *THE GREAT ARTISTE*, but alone over its target on the main Japanese island of Honshu, the *ENOLA GAY* wreaked this incredible destruction with a single uranium bomb. In later years, this type of formation from a nuclear blast would become known as a mushroom cloud. (*AAF*)



Sweeney turned *BOCKS CAR* toward its secondary target, the port city of Nagasaki.

Given that the Japanese had had little time to respond to Hiroshima, the fuel-flow problems aboard *BOCKS CAR* and the smoky conditions at the primary, was this prosecution of this mission carried out too hastily? Grp Capt Leonard Cheshire, the highly decorated RAF Bomber Command veteran who was serving as an observer with the 509th, and who was aboard *BOCKS CAR*, later remarked:

'As a matter of fact, I may well confess that we were so keen on dropping this bomb on Nagasaki, and would have been so disappointed if the war had ended without our doing so, that some of us jokingly suggested that if Japan did surrender before we flew to Nagasaki, that we might even fly there and drop the bomb just the same!'

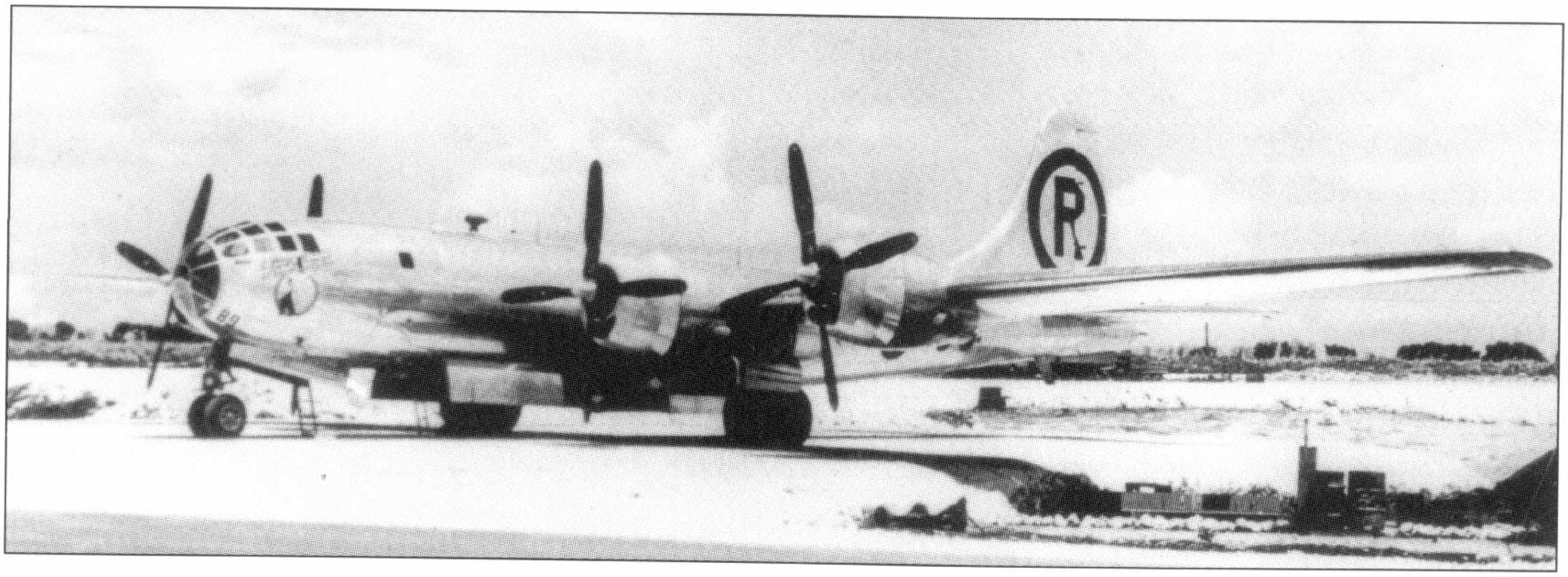
Another observer described the critical moments of the mission this way:

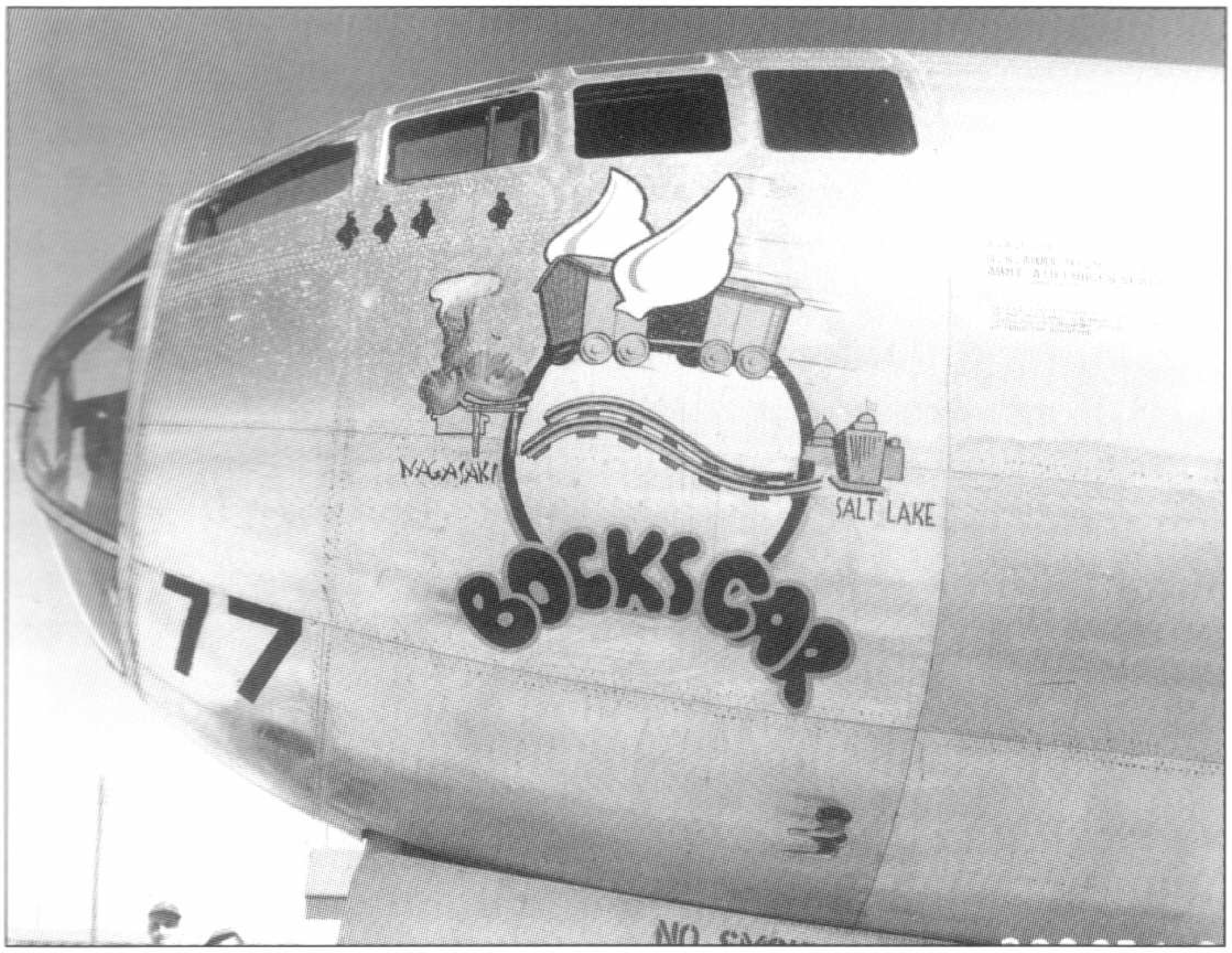
'When the primary could not be attacked due to cloud cover, they diverted to Nagasaki, where cloud cover again intruded. All told, they stooged around for an hour burning reserve fuel they didn't have trying to make the mandated visual attack.

'As they lacked the reserve fuel to return the bomb to Tinian, the bomb was dropped in a poorly executed radar attack, which was switched to a visual through a sucker hole at the last minute, and which essentially

Attired in spurious 6th BG markings, and with Col Paul Tibbets at the controls, the *ENOLA GAY* returns to Tinian on 6 August after dropping its 'Little Boy' gun-type uranium bomb on Hiroshima. There was no truth to the rumour that the name *ENOLA* was actually the word 'alone' spelled backwards – the name was simply that of Col Tibbets's mother. (*AAF*)

Wearing spurious 6th BG markings when actually assigned to the 509th CG, Martin-built B-29-35-MO 44-27353 *THE GREAT ARTISTE* was named for Maj Charles Sweeney's navigator Kermit Beahan, who was known as the most accurate bombardier in the 509th. Note that the bomber lacks any turrets, which was the most obvious recognition feature of the limited production run *Silverplate* aircraft.





Martin B-29-35-MO 44-27297 *BOCKS CAR* (without the apostrophe!) of the 509th CG/313th BW. On 9 August 1945, *BOCKS CAR*, flown by Maj Charles Sweeney, dropped a 'Fat Man' plutonium bomb on Nagasaki. For many years, AAF press releases and historical documents credited the wrong bomber with the Nagasaki drop, stating that *THE GREAT ARTISTE* had been the bomb carrier. This photograph was taken at the 509th's post-war home of Roswell Air Force Base, New Mexico, on 29 March 1946. (*AAF*)

missed the intended aiming point by sufficient distance to reduce the effects on the target of the much more powerful "Fat Man" to far less than that accomplished by the "Little Boy" at Hiroshima. Then, lacking fuel to make it back even to Iwo Jima, the bomber had to divert to Okinawa, where it landed on fumes.'

Another source says the Nagasaki drop was a radar drop with no visual clues available to the bombardier, in violation of the rule.

Unlike the blast at Hiroshima, a reporter witnessed the Nagasaki detonation. In a bizarre marriage of government and press, Groves had hired *New York Times* science reporter William L Laurence to write press releases and other documents, all of which were kept behind lock and key until the atomic bombings began. Unaware that Sweeney and Bock had switched aircraft – and confused about which bomber he was aboard – Laurence would write that the second bomb was dropped by *THE GREAT ARTISTE*, a mix-up of fact that persisted in official despatches for years afterward. Laurence was flying with Bock as an observer that day, believing that he was aboard *BOCKS CAR*, when he was actually a passenger on the *ARTISTE*!

Laurence has often been accused of allowing his insider status with the Manhattan Project to render him bereft of critical judgement. His writings about the atomic bombings were always upbeat and positive. He described the Nagasaki weapon thus:

'It is a thing of beauty to behold this gadget. Into its design went millions of man-hours of what is without a doubt the most concentrated intellectual effort in history. Never before had so much brain-power been focused on a single problem.'

Laurence wrote of the drop on Nagasaki as follows:

'We removed our glasses after the first flash, but the light still lingered on, a bluish-green light that illuminated the entire sky all around. A tremendous blast wave struck our ship and made it tremble from nose to tail. This was followed by four more blasts in rapid succession, each resounding like the boom of cannon fire hitting our plane from all directions.

'Observers in the tail of our ship saw a giant ball of fire rise as though from the bowels of the earth, belching forth enormous white smoke rings. Next they saw a giant pillar of purple fire, 10,000 ft (3084 m) high, shooting skyward with enormous speed.

'By the time our ship had made another turn in the direction of the atomic explosion, the pillar of purple fire had reached the level of our altitude. Only about 45 seconds had passed. Awe-struck, we watched it shoot upward like a meteor coming from the earth instead of from outer space, becoming ever more alive as it climbed skyward through the white clouds. It was no longer smoke, or dust, or even a cloud of fire. It was a living thing, a new species of being, born right before our incredulous eyes.

'At one stage of its evolution, covering missions of years in terms of seconds, the entity assumed the form of a giant square totem pole, with its base about three miles long, tapering off to about a mile at the top. Its bottom was brown, its centre was amber, its top white. But it was a living totem pole, carved with many grotesque masks grimacing at the earth.

'Then, just when it appeared as though the thing has settled down into a state of permanence, there came shooting out of the top a giant mushroom that increased the height of the pillar to a total of 45,000 ft. The mushroom top was even more alive than the pillar, seething and boiling in a white fury of creamy foam, sizzling upwards and then descending earthward, a thousand "old faithful" geysers rolled into one.

'It kept struggling in an elemental fury, like a creature in the act of breaking the bonds that held it down. In a few seconds it had freed itself from its gigantic stem and floated upward with tremendous speed, its momentum carrying it into the stratosphere to a height of about 60,000 ft (18,288 m).

'As the first mushroom floated off into the blue, it changed its shape into a flower-like form, its giant petal curving downward, creamy white outside, rose-colored inside. It still retained that shape when we last gazed at it from a distance of about 200 miles (320 km).'

With the only non-military observer perhaps unaware that fuel was at a premium, or that the Nagasaki drop had been badly botched, Sweeney did a superb job of coaxing *BOCKS CAR* to Okinawa. He later said that if the island had been ten miles farther, the world's second atomic bomber and its crew would have gone into the sea. Not hindered by a fuel problem, *THE GREAT ARTISTE* made it directly back to Tinian, its arrival perhaps contributing to the myth that it had dropped the bomb.

The Nagasaki raid killed about 35,000 people, nearly all civilians. Included in this number were a few Allied PoWs. In fact, the devastation would have been at least twice as great had the bomb not missed ground zero by nearly three miles, or about five kilometres.

There was little doubt on the part of Twentieth Air Force commanders, B-29 bomber crews, or even ordinary Americans that the bombing was an inevitable part of war. Few on the Allied side doubted it was necessary.

Through the final moments of the fighting in the Pacific, Twentieth Air Force B-29 crews continued their conventional assault on the Japanese home islands. Indeed, 245 B-29s went to Yawata on 8 August, the 314th BW struck Tokyo two days later and the 313th flew a 31-aircraft mining raid. This series of four final missions came to an end when the 315th BW struck the oil refinery at Tsuchizaki on 14 August.

FINAL MISSION

One of the aircraft sent on this final mission of the war was Bell-manufactured B-29B 42-63640 *The BOOMERANG*, crewed by ten men of the Guam-based 315th BW, most of them in their late teens and early twenties. 1Lt Carl Schahrer was the commander and pilot, 1Lt John Waltershausen the co-pilot, 1Lt Dick Marshall the bombardier, S/Sgt Hank Gorder the engineer, 1Lt Tony Cosola the navigator, 1Lt Dick Ginster the radar operator, Sgts Hank Carlson and Henry Leffler the scanners, Sgt Sidney Siegel the tail gunner and Sgt Jim B Smith the radio operator (and a last-minute replacement when the original radio operator was hospitalised).

Although bombing missions were initially cancelled when hints appeared that there might be a settlement with the Japanese to end the fighting, on 13 August the 58th, 73rd and 313th BWs (although not the 315th) were placed on standby to strike three more targets – Hikari Naval Arsenal, Osaka Army Arsenal and the Marifu Railway Marshalling Yards, which had not been attacked successfully in the past.

Troops were anticipating (and celebrating) the end of the war, and most thought the standby wings would not have to complete their missions.

At the 315th BW, as *The BOOMERANG's* radio operator Jim Smith recalled, 'It was like being in a ball game. You thought you'd won it. Then you were told to go back in and continue playing'. On 14 August, notwithstanding expectations of a Japanese surrender, the 315th BW prepared for a maximum effort, 143-aircraft, mission. The other wings, previously alerted, were now stood down.

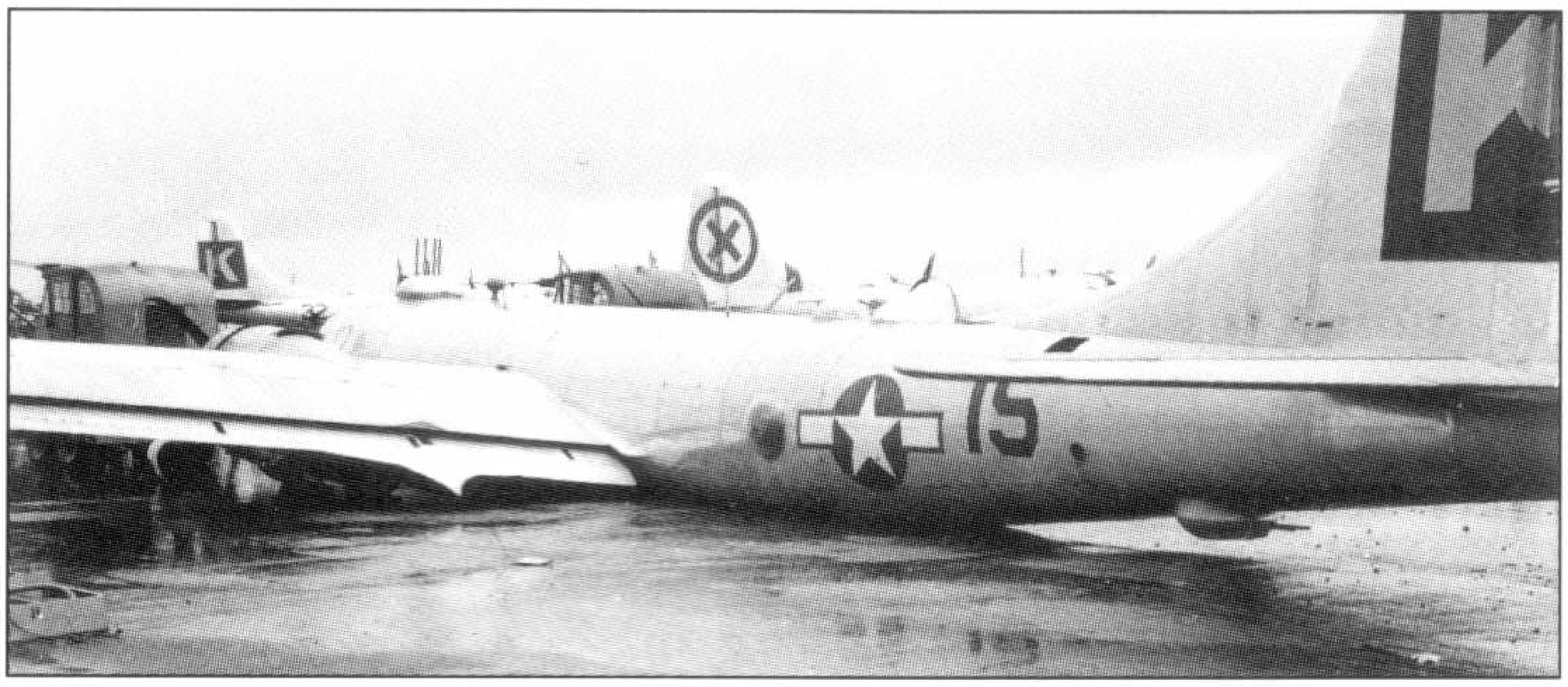
'This will be the longest B-29 mission ever attempted from the Marianas (logged time was 17 hours total)', the briefer told crewmen. 'You will be carrying a full 10+ ton bomb load, with no bomb-bay fuel tanks. Your assignment is to bomb the Nippon Oil Company Refinery at Akita (responsible for 67 per cent of Japan's remaining annual oil refining capability). Your target is located approximately 275 miles (443 km) north-west of Tokyo.

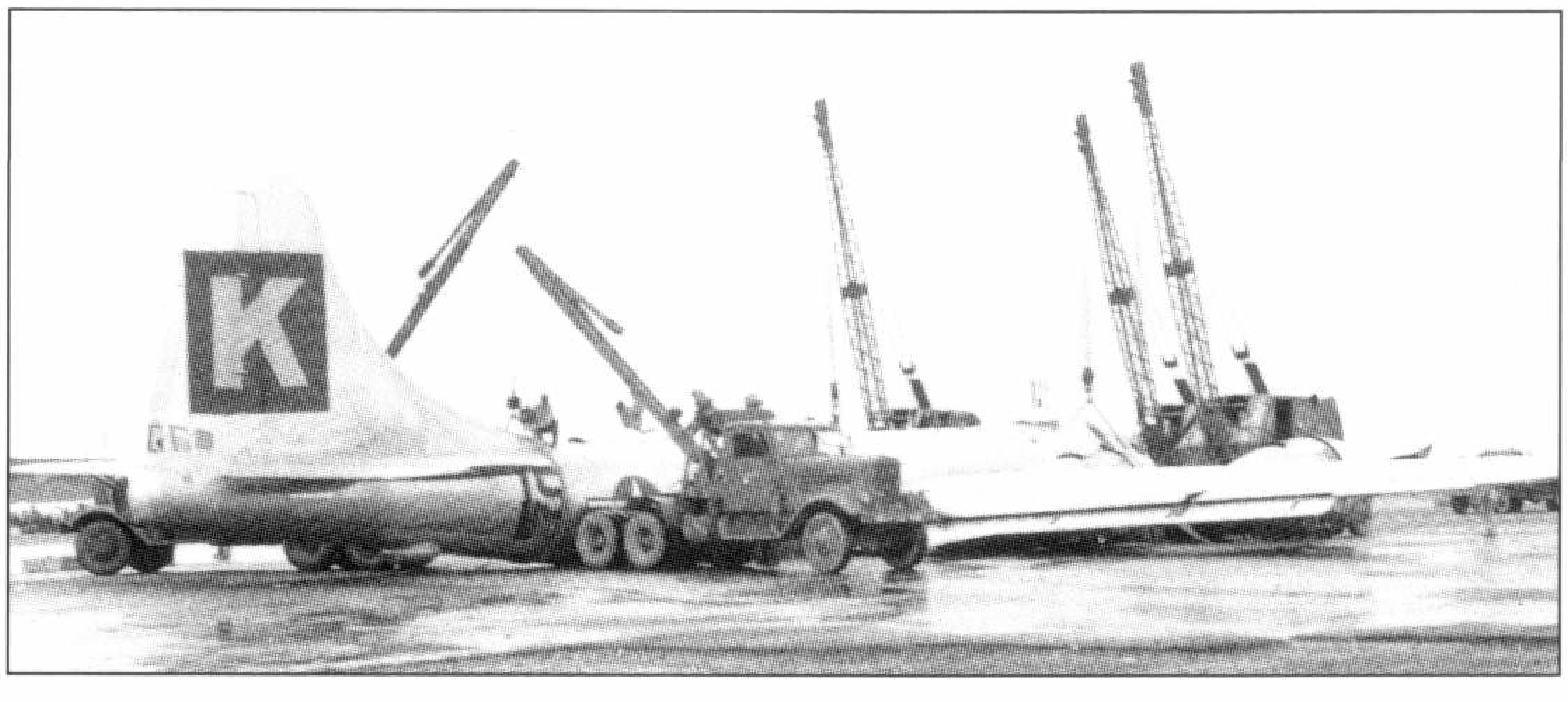
'The Japanese do not believe we can reach Akita from the Marianas, and fortunately have not built large defences there. You shouldn't encounter much opposition unless they figure out your B-29Bs have been stripped of armament. The mission to Akita and back will take you almost 3800 miles (6118 m). You'll be going to the end of your cruise control envelope, since you'll be carrying a minimum of fuel for that distance (a rock bottom 6300 gallons) and an absolute maximum allowable bomb load of 20,500 lbs (9298 kg). You will be carrying high explosive, general purpose bombs of 100-lb(45-kg) and 250-lb (113-kg) sizes, with non-delay tail fuses.'

The BOOMERANG's crew had flown nine combat trips over Japan. They knew that if this mission went as planned, they would not only be testing cruise control to the maximum, they would also be testing worn-out engines and worn-out crews who had been flying all-night missions that averaged close to 14 hours.

The briefing officer explained that the word 'Apple' would be sent

Below and bottom
'K15' of the 330th BG/314th BW crashed onto Iwo Jima on 8 August 1945, slid along a rain-slackened runway on its belly and came to a halt, apparently without harming any of its crew. The Superfortress stopped at a busy intersection where space was at a premium, so maintenance men brought in no fewer than five cranes to move the bomber. (*Bill Hess*)





in Morse code if the United States received word of a Japanese surrender. That would be the order for the 315th BW to salvo its bombs and return to base. The radio operators were ordered to monitor their frequency from the time engines were started.

'It's my guess you'll receive the scrub word "Apple" before you reach Iwo (Jima) en route to Japan', the briefing officer added.

The BOOMERANG's co-pilot, John Waltershausen, remembered:

'There were a number of men in different crews that were far from sober when it came time for take-off. I can still see one of the pilots that needed someone on each arm to help him walk to his plane.'

Dick Marshall, bombardier of *The BOOMERANG*, said:

'Some time passed, I don't recall how long, then the order came through to start engines. We were idling for a while and nothing was moving. The thought went through my mind that those suckers out there are really consuming a hell of a lot of fuel, so let's do it or get off the pot. About that time an order came through to cut engines. We were all thinking that the mission had been scrubbed.

'Soon thereafter, we got the order to start engines again. This time when those engines kicked over they were really laying down a smoke screen from having idled for so long, but everything was checking out fine. This time it was for real.'

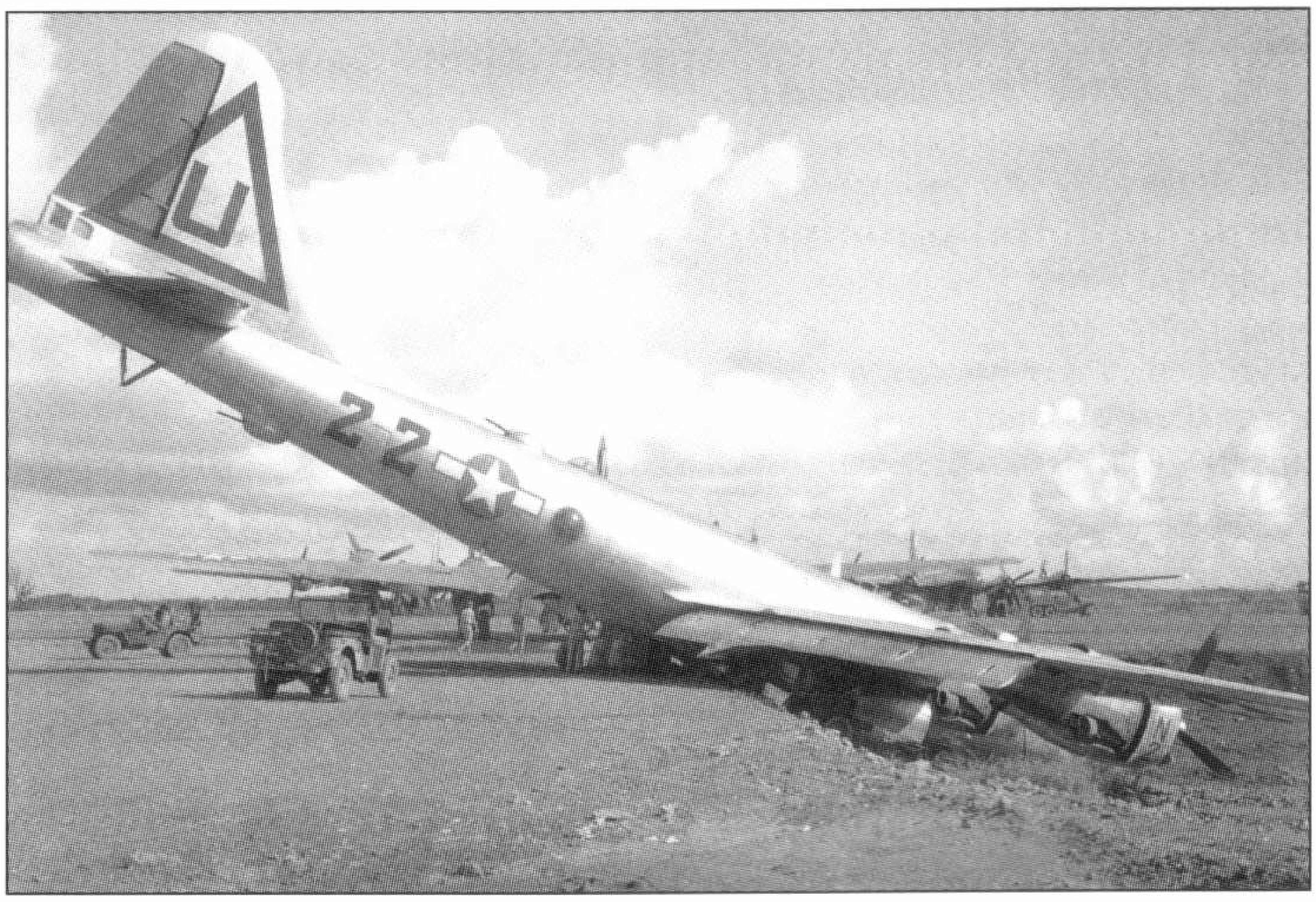
The BOOMERANG's crew had no knowledge that at 1449 hrs (1549 hrs Guam time), 53 minutes before they were ordered to fly, the Japanese Domei News Agency had broadcast an urgent message to the United States and Pacific Theatre which was picked up by an American radio operator on Okinawa:

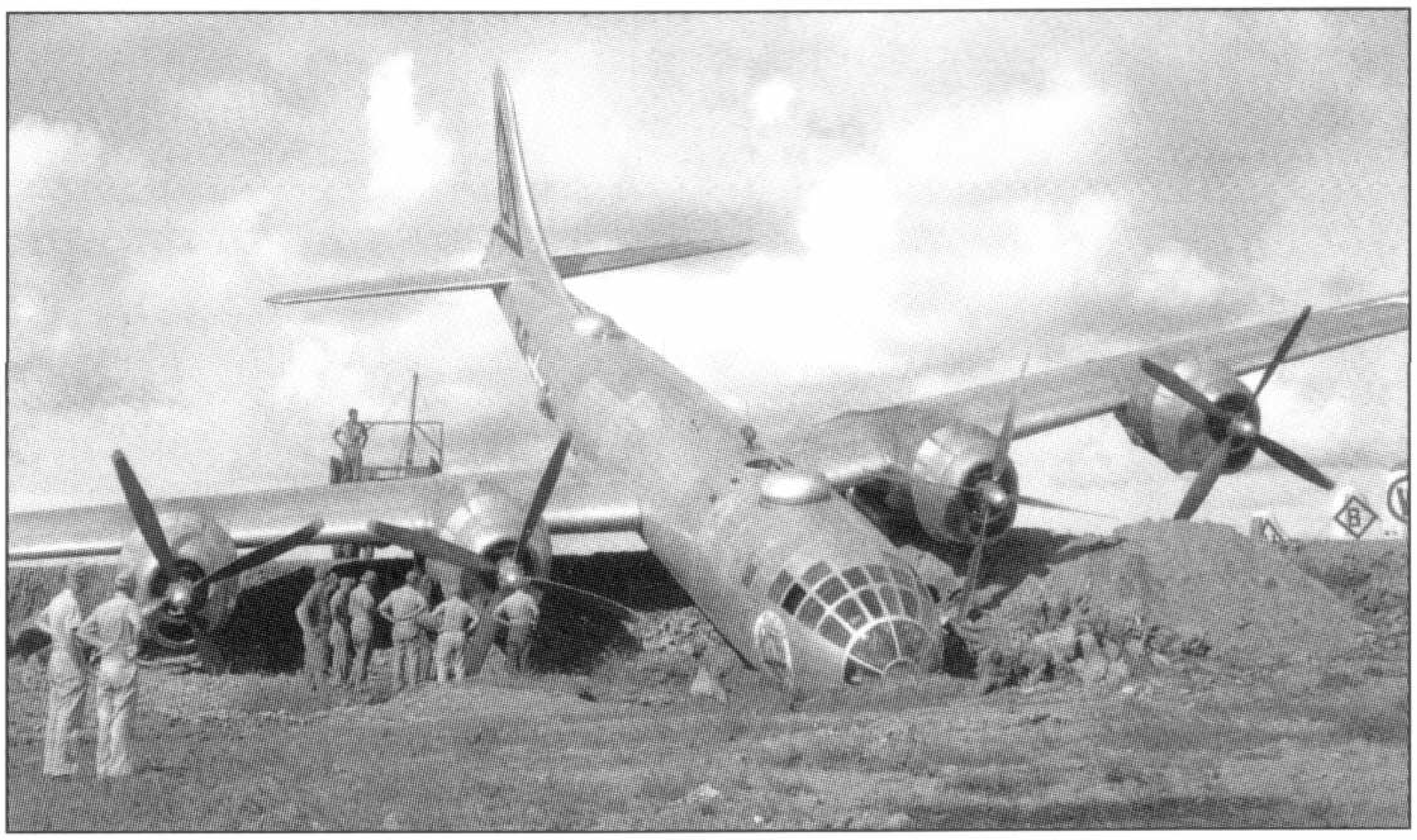
'Flash flash Tokyo August 14 – it is learned that an imperial message accepting the Potsdam proclamation is forthcoming soon.'

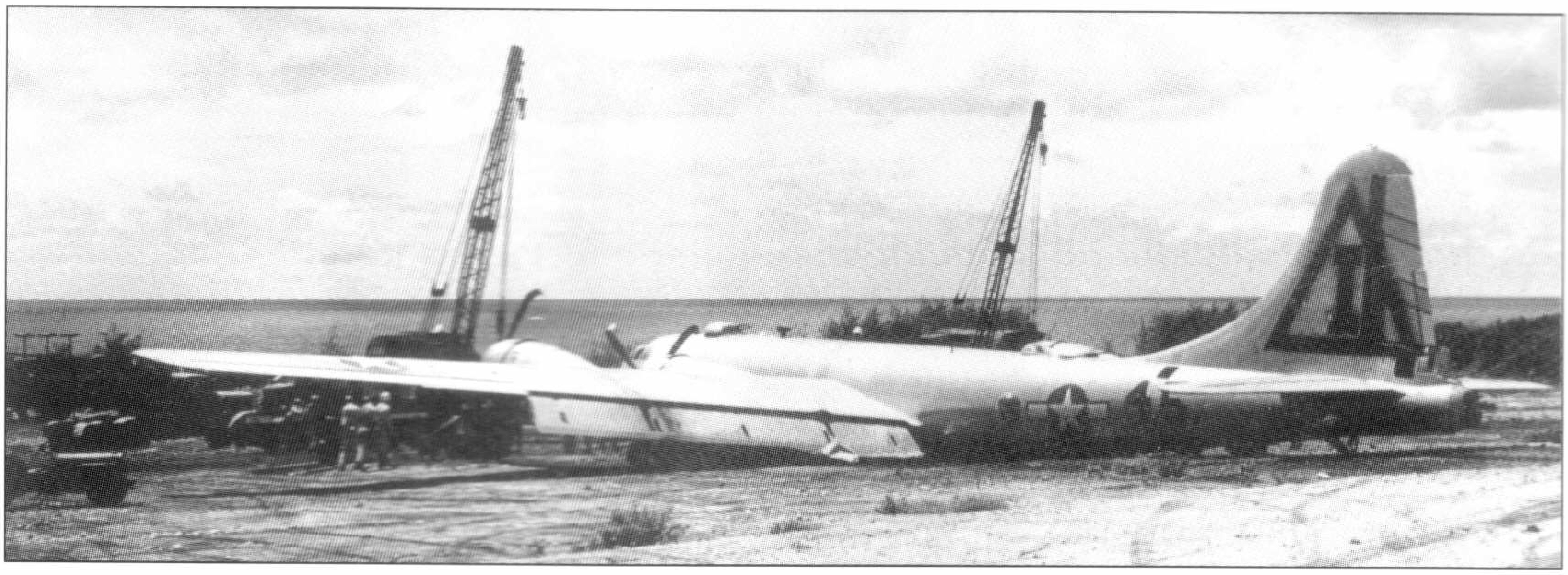
It was later assumed Japan wanted to keep the United States informed of their imminent surrender to deter any further bombing.

In Tokyo at 1600 hrs on 14 August, Lt Col Masataka Ida and Maj Kenji Hatanaka were plotting a revolt. They planned to occupy the Imperial Household Ministry and cut off the Palace from outside contact. They would protect the Emperor from his 'traitorous' advisors to help him preserve Japan. Hatanaka announced he already had positive contacts with the Imperial Guards Division, and believed the whole Army would soon follow.

Carrying the 'Hellbirds' titling and badge on its nose, 'U22' could belong only to the 462nd BG. It has a non-standard presentation of the aeroplane-in-group number on the rear fuselage, with the '22' resembling the letters 'ZZ'. Like so many bombers that could not make it all the way home from Japan, this Superfortress touched down at Iwo Jima and came to a halt with its tail pointing at the sky, having careered off the main runway. (*Bill Hess*)







Many of the airmen in the Twentieth Air Force possessed cameras in the combat theatre, but few seem to have made the effort to photograph intact aircraft in good condition on the ramp! More than half a century later, most surviving images fall into two categories – nose art (although the term was not in use at the time) and aircraft mishaps. In this instance, Triangle 'I45' of the 468th BG/58th BW seems to have run out of landing gear and runway at about the same time.
(*via David R McLaren*)

At 2030 hrs the Emperor signed the Rescript, and the Imperial seal was affixed. The date being given next to the Imperial signature and seal read, 'The fourteenth day of the eighth month of the twentieth year of Showa (enlightened peace)'.

The crew of *The BOOMERANG* were filled with anxiety, anticipating at any moment the mission would be cancelled. The pilot asked the radio operator every few minutes if he had heard the word 'Apple'. The answer was always 'No'.

In Tokyo, Maj Hatanaka repeated his fear that once the Emperor had recorded the Rescript, and it had been broadcast, the planned revolt would not be able to accomplish its objectives. Meanwhile, the recording team for the Imperial Broadcast (from NHK radio) waited for Emperor Hirohito to record the Rescript. The Prime Minister, Suzuki Kantaro, signed the Rescript at approximately 2200 hrs. At the same time *The BOOMERANG* was 400 miles (644 km) south of Tokyo. Its crew still had not heard the word 'Apple'.

The BOOMERANG and its crew were now 200 miles (322 km) from Tokyo, and the pilot asked for the last time if the code word had been given. The answer again, 'No'.

The Emperor was getting ready at 1105 hrs to be transported to the Imperial Household Ministry, where he would make his recording of the surrender message. But an advisor, worried that Tokyo might be hit with an atomic bomb, urged the Emperor to wait in the bomb shelter until they could get information regarding enemy targets. The Emperor agreed and went to the underground bomb shelter for an estimated 20 to 30 minutes.

When *The BOOMERANG* approached Kodama at midnight, 37 miles (60 km) west/north-west of Tokyo, 36 fighters from the JAAF's 27th Sentai came looking for them. The bombers struck their target.

The Emperor completed his recording after a second taping, oblivious of the plans for the revolt. Two sets of records containing his surrender speech were put into metal cases. The lids didn't fit tightly, so they were put into two 18-inch khaki-coloured cotton bags, originally designed to hold uniforms. Chamberlain Tokugawa was given the records and ordered to hide them. He did so in an office safe used by a member of the Emperor's staff, locked the safe, then piled papers on and around to camouflage the bags.

The BOOMERANG's bombardier, Dick Marshall, recalled:

'I went back into the bomb-bay to arm the bombs. I crawled out onto the catwalk and proceeded to pull the cotter pins from the detonating fuse on each bomb. When I finished, I returned to my bombsight in the nose of the aeroplane, and prepared it with the data I was going to use on this run. Once we crossed the coastline at the predetermined point, we would have about 100 miles (161 km), or roughly 20 minutes, to target.'

So many Superfortresses made emergency landings on the tiny atoll of Iwo Jima that, eventually, there was hardly space to move. In this photograph, apparently taken on 28 July 1945, at least 40 B-29s can be seen. Note the wide array of tail markings on display (*Bill Hess*)

The BOOMERANG was 1800 miles (2898 km) from base, with about 3000 gallons of fuel left, when a palace revolt began in Tokyo. Hatanaka went back to the Imperial Household Ministry Building, where he learned the Emperor had indeed recorded the Rescript and left the premises. The rebels and 2nd Regiment guards swept through the Imperial Household Ministry Building, as well as the Palace grounds, in search of the Emperor's recorded Rescript. They vowed they would search every room until they found the recordings. Then, with the recordings in hand, they could cancel the Emperor's planned broadcast at noon, and that would give them time to turn things around.

The search for the Imperial recordings became progressively more frantic and violent. The soldiers began to kick in doors, and scattered contents of drawers on the ground. Eventually, Hatanaka lost control, and with tears in his eyes he told officers it was all over. He added, in almost inaudible words, they had given everything they had to save Japan, and there was no more to give.

At 0721 hrs on 15 August 1945, NHK radio broadcast a special bulletin. 'His Imperial Majesty, the Emperor, has issued a Rescript. It will be broadcast at noon today. Let us respectfully listen to the voice of the Emperor.'

The bulletin was repeated over and over. The crew of *The BOOMERANG's* yelled and whooped, for they knew that they would not have to test their luck over Japan ever again.

Members of the 315th BW received a Distinguished Unit Citation for flying the longest bombing mission in World War 2 to destroy the Akita target. A note from the unit history microfilm reads:

'This target was of extreme importance to the enemy as it processed crude oil from the fields around Akita, the largest natural source in Japan proper. The damage assessment on all structures averaged 86 per cent.'

Photos revealed that no part of the target was untouched.

The surrender of Japan became official at noon on the 15th. In his book *The Last Mission*, radio operator Smith states:

'If the palace revolt had succeeded, our naval forces would most certainly have come under attack hours after President Harry S Truman received the official Japanese note of surrender.

'A third atomic bomb was being readied to be shipped to Tinian, and could have been dropped on Japan on the first good weather day after 17 or 18 August. (Smith is incorrect about this, for the third bomb was not ready to be assembled.) Those of us who remember Truman (once an obscure senator with doubts about the military potential of the B-29) know he would have responded promptly to any Japanese military action coming after Japan's cabled surrender.'

SUPERFORTRESS ROLE

The USSR's belated entry into the Pacific war after the Nagasaki bombing had little impact on the outcome of the conflict (although it would result in a tragic division of the Korean peninsula). Almost unnoticed was the fact that the communists now had their own B-29 Superfortress – *RAMP TRAMP*, an internee for more than a year, was now being flown in Moscow, and its Soviet-built carbon copy, the Tupolev Tu-4, was being constructed. The West had gained nothing and lost much by bringing the Soviet Union into a war that was now over.

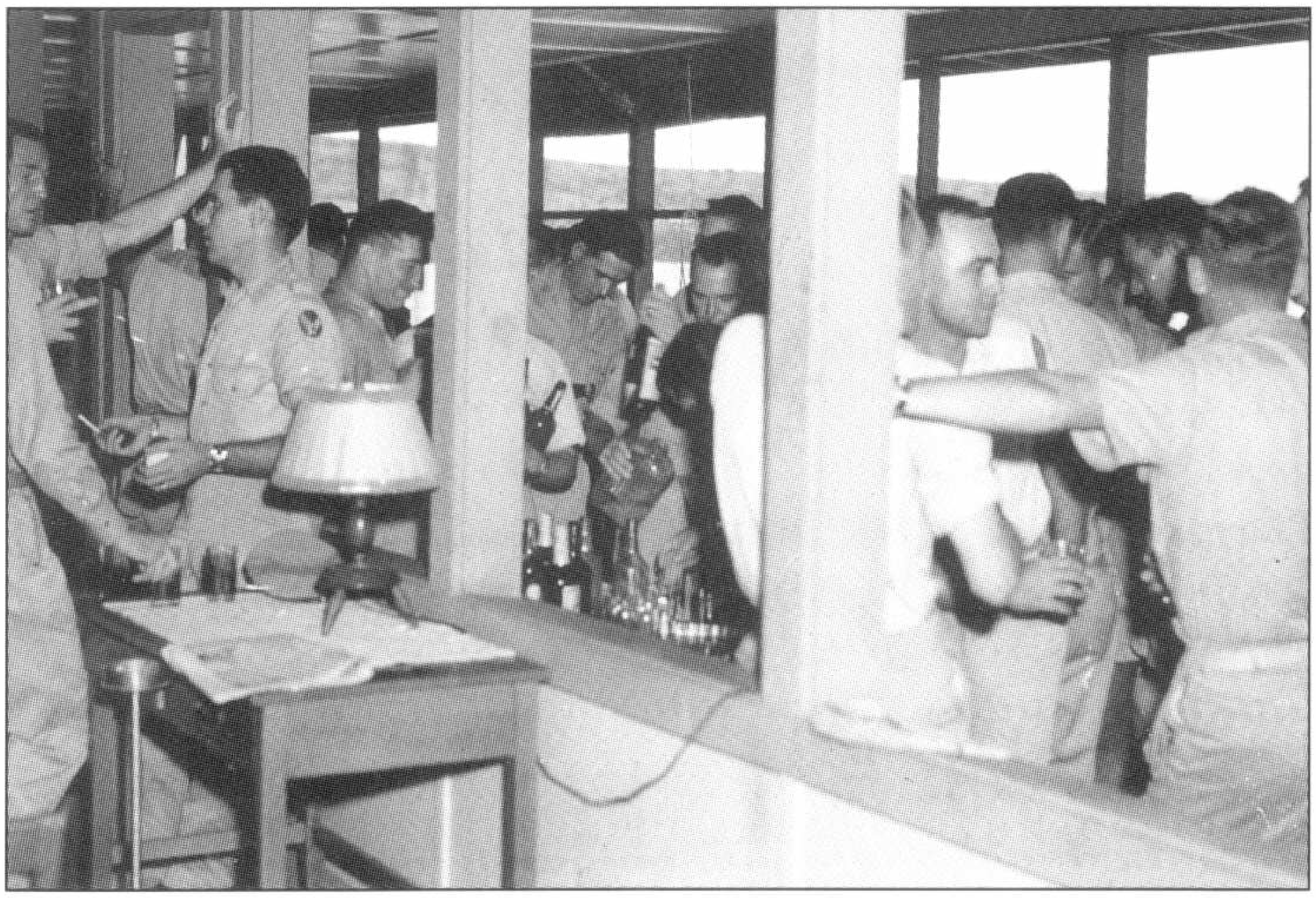
On 15 August 1945, the Allies insisted that they were getting the unconditional surrender of Japan that they had sought, when in reality they had acquiesced, preserving the institution of the Emperor. Once the fighting ended, B-29 crews began flying supply missions to PoW camps.

The formal surrender was inked aboard the battleship USS *Missouri* (BB-63) beneath a 2000-aircraft flyover that was the largest aerial formation ever assembled. Looking down at the battleship's crowded deck from his B-29, Sgt Steve Savko thought to himself, 'Extraordinary'. The war was over, but the B-29 Superfortress had further duty ahead in the Cold War and the Korean conflict.

B-29s had dropped 104,000 tons of bombs on Japan, which had in turn reduce to rubble 169 square miles in 66 cities. The raids left 9.2 million civilians homeless, including 3.1 million in Tokyo alone.

Between June 1944 and August 1945, Twentieth Air Force's B-29 force, controlled by XX and XXI Bomber Commands, flew 380 missions, mounted 27,611 bombing sorties, were credited with shooting down 871 Japanese aircraft, and lost 402 bombers. Tokyo, Osaka-Kobe, Nagoya and Yokohama had been razed. The Boeing B-29 Superfortress, always promising, initially trouble-plagued, and ultimately triumphant, had done its job.

Below and bottom
The ceremonial end to the war came when Japanese officials like Namoro Shigomotsu (seated, bottom photograph) signed the surrender document aboard the battleship USS *Missouri* (BB-63) in Tokyo Bay on 2 September 1945. But the end of the fighting, and the date known to the Allies as VJ-Day (while many in Asia, freed from their occupiers, simply called it Liberation Day) was 15 August 1945. On that date, Brig Gen Emmett 'Rosy' O'Donnell, commander of the 73rd BW, held a 'Victory Day' party in his sparse billet on Saipan, and these B-29 Superfortress crew members were in attendance.
(*Chester Marshall/US Navy*)



APPENDICES

COMPARISON OF ATOMIC BOMB ATTACKS WITH OTHER BOMBINGS

Target	Hiroshima	Nagasaki	Tokyo Fire Raid
(Average of 93 Attacks on Cities)			
Dead/Missing	70,000–80,000	35,000–40,000	83,000
Wounded	70,000	40,000	102,000
Population Density	35,000 per sq mile	65,000 per sq mile	130,000 per sq mile
Total Casualties	140,000–150,000	75,000–80,000	185,000
Area Destroyed	4.7 sq miles	1.8 sq miles	15.8 sq mile
Attacking Platform	1 B-29	1 B-29	334 B-29s
Weapon(s)	'Tall Boy' 15,000 kiloton	'Fat Man' 22,000 kiloton	1667 tons

XXI BOMBER COMMAND

Saipan, Marianas, Guam
Commanded by Maj Gen Haywood Hansell, August 1944 to January 1945, then Maj Gen Curtis E LeMay, January to August 1945

73rd Bombardment Wing

Isely Field, Saipan, Marianas
Brig Gen Emmett 'Rosy' O'Donnell
Bomb Groups: 497th, 498th, 499th, 500th

Each group identified by a group letter placed high on the vertical fin. The 73rd BW identified by an outlined square placed halfway up the fin but above the serial presentation. The aircraft within each squadron identified by an aircraft number at the bottom of the vertical fin (1-19, 21-39, 41-59) in turn identifying the squadron.

Letters assigned were 497th BG 'A', 498th BG 'T', 499th BG 'V' and 500th BG 'Z.' Serial number presentation was deleted on most aircraft, with the 'last four' digits of serial appearing on either side of the rudder in black. From April 1945, a single large block letter in black on the fin, each group using the same letter as previously. Aircraft number in black on the rear fuselage aft of the national insignia. Individual aircraft names replaced by a wing emblem, namely a winged black ball with a long, black-outlined yellow barb through it, with aircraft name, if any, painted through the forward part of the barb.

XX BOMBER COMMAND

Kharagpur, India
Commanded by Lt Gen Kenneth Wolfe, November 1943 to July 1944, then Maj Gen Curtis E LeMay, August 1944 to January 1945

58th Bombardment Wing

Kharagpur, India, April–October 1944
West Field, Tinian, March–November 1945
Brig Gen La Verne G Saunders, April–October 1944
Brig Gen Roger Ramey, May–August 1945
Bomb Groups: 40th, 444th, 462nd, 468th

40th BG – horizontal strips across fin top, the 25th BS's in red, 44th BS blue, 45th BS yellow, 395th BS black (deactivated October 1944). After May 1945, Triangle 'S' all squadrons.

444th BG – controlling 676th, 677th , 678th 'Flying Cobras' and 679th BSs. Aircraft numbers inside a diamond on fin, with the diamond being black with white number on natural-metal aircraft, and white with black number on olive-drab aircraft. From October 1944, squadron fuselage colour band, with 676th BS green, 677th BS yellow and 678th BS red (679th BS deactivated October 1944). After May 1945 Triangle 'N' all squadrons.

462nd BG 'Hellbirds' – prior to October 1944, an identifying letter on fin and coloured rudder. After October 1944, 'L' on fin, coloured rudder, with colours varying by squadron – 768th BS red, 769th BS yellow, 770th BS brown and 771st BS blue. From October 1944, all coloured rudders painted red to identify the group, with a squadron number on fin – 768rd BS No 1, 769th BS No 2 and 770th BS No 3. After May 1945 Triangle 'U' all squadrons.

468th BG – paired diagonal bands on fin, usually bordered in black. 792nd BS white, 793rd BS blue, 794th BS brown and 795th BS yellow. On deactivation of the 795th BS in October 1944, the 794th BS was actually disbanded and the 795th became the new 794th, but with yellow bands. After May 1945 Triangle 'I' all squadrons

472nd BG – trained B-29 crews in US and disbanded in April 1944.

313th Bombardment Wing

North Field, Tinian
Brig Gen John H Davies
Bomb Groups: 6th, 9th, 504th, 505th, 509th Composite Group (CG)

Markings patterned after those of 73rd BW, but with an outlined triangle rather than a square as the wing symbol. Reading from top to bottom of fin, this meant a letter followed by a triangle followed by an aircraft number. Letters were 'L' for 6th BG (24th, 39th and 40th BSs), 'X' for 9th BG (1st, 5th and 99th BSs), 'E' for 504th BG (398th, 421st and 680th BSs) and 'K' for 505th BG (482nd, 483rd and 484th BSs).

From April 1945, a large outlined black circle worn on the fin to identify the wing, with a black group letter within it. Letters changed to 'R' for 6th BG, 'X' for 9th BG, 'E' for 504th BG and 'W' for 505th BG. A group colour applied to the tip of the vertical tail and about the centre portion of the engine cowlings. Colours were red for 6th BG, white for 9th BG, yellow for 504th BG and blue for 505th BG.

The 509th CG, nominally assigned to the wing in July 1945, arrived wearing an arrowhead group marking but its aircraft were repainted in markings from other units from late July 1945. For example, the *Enola Gay* wore the circle 'R' of the 6th BG.

314th Bombardment Wing

North Field, Guam
Brig Gen Thomas S Power
Bomb Groups: 19th, 29th, 39th, 330th

A large black square as a wing symbol, within which was a natural metal finish group letter, namely 'M' for 19th BG (28th, 30th and 93rd BSs), 'O' for 29th BG (6th, 43rd and 52nd BSs), 'P' for 39th BG (60th, 61st and 62nd BSs) and 'K' for 330th BG (457th, 458th and 459th BSs)

315th Bombardment Wing

Northwest Field, Guam
Brig Gen Frank Armstrong
Bomb Groups: 16th, 331st, 501st, 502nd

A large outlined black diamond as the wing symbol, with a black group letter within it, namely 'B' for 16th BG (15th, 16th and 17th BSs), 'L' for 331st BG (355th, 356th and 357th BSs), 'Y' for 501st BG (21st, 41st and 485th BSs) and 'H' for 502nd BG (402nd, 411th and 430th BSs).

3rd Photo Reconnaissance Squadron

The F-13A Superfortresses (photo-reconnaissance version of the B-29) of the 3rd Photo Reconnaissance Squadron wore the letter 'F' in black on the fin above the radio call letters (serial number presentation).

B-29 (standard production). All scale drawings to 1/144th scale

B-29 *Silverplate* (A bomber)

F-13A photo-reconnaissance variant

B-29A (early build)
B-29A (early build)
B-29A

B-29B

COLOUR PLATES

1

B-29-25-BW 42-24457 *Battln' Beauty* of the 25th BS/40th BG, Chakulia, India, October 1944

The 40th BG's costliest mission of the war was the raid on the Burmese capital of Rangoon on 14 December 1944. Despite objections from some senior officers, the decision was made for each of the participating B-29s to sortie with a mixed bombload of 12 1000-lb and six 500-lb HE bombs. Prior to striking at Rangoon, the formation had made two attempts to bomb its primary target, the Rama VI bridge in Bangkok, but this was obscured by cloud cover. The crews diverted to their secondary target – the railway marshalling yards at Rangoon. Just after bomb release, a mixed bombload exploded prematurely beneath the low element of the formation, and 11 aircraft in the immediate vicinity received varying degrees of damage. The four B-29s of the low element were so badly holed that they duly crashed, whilst five others limped back to emergency bases. Only two returned to Chakulia, one of which (42-6237 *Sir Troferpus*) had a fatally wounded crewman aboard. Two complete crews successfully bailed out, including that of *Battln' Beauty*, commanded by Capt Cornelius Myers. A total of 17 men were killed during the mission, and a further 29 became PoWs – all of them survived to be liberated by the British in May 1945. Aside from 42-24457, the other aircraft to be lost were 42-24726, flown by Capt Howard Gerber (11 killed), 42-93831 commanded by 1Lt Wayne Treiser (five killed and six PoWs) and 42-24574 '293', flown by Capt Bob Shanks (11 PoW). *Battln' Beauty* is depicted as it appeared in October 1944, wearing early-style CBI markings that consisted of four nine-inch bands under a coloured fin tip. When, in September 1944, Gen Curtis LeMay took command of B-29 operations in the CBI, one of the changes he instigated was to eliminate a squadron from each of the 58th BW groups – this came into effect on 12 October. The 40th BG selected the 395th for disbandment, as it had experienced the most losses. Its aircraft and crews were duly transferred to the remaining three squadrons. From October onwards, each aircraft within the 40th BG was assigned a 63-in aeroplane-in-squadron identifying letter that was located below the radio call number, the latter being an abbreviated version of the bomber's serial number. The location of the fuselage national insignia varied depending on where the aircraft had been manufactured. Boeing's Wichita plant (-BW) placed them centred at station 756, and inclined 1½ degrees to the horizontal datum. Most 40th BG B-29s had the unit badge applied, via a stencil, to the port side of the nose. The badge incorporated the logo *KAGU TSUCHI, THE SCOURGE OF THE FIRE GOD*, and the example shown in the nose art section appeared on B-29A-45-BN 44-61746, which was also assigned to the 25th BS. This particular aircraft had nine mission marks in the form of weather vanes to the left of the badge, these indicating its participation in weather missions where a single B-29 reported conditions at the target area for the group's attacking aircraft. Above these symbols is the aircraft's serial block.

2

B-29-45-BW 42-24752 *WICHITA WITCH* of the 44th BS/40th BG, West Field, Tinian, June 1945

The 58th BW moved to Tinian in April 1945, and that same month XXI Bomber Command introduced a standardised marking scheme for the then 20 bomb groups within its command. Previous B-29 markings were difficult to see from a distance, so the new system made full use of the aircraft's large fin area by employing group symbols that were between 10 and 12 ft high. The 58th BW utilised a large equilateral triangle containing a 'group' letter – the 40th BG's was 'S'. The fin tip colour representing the different squadrons was retained, but the aeroplane letter was dropped in favour of an aeroplane number, located on the fuselage. As with other B-29 bomb groups, the 40th's numbers ran sequentially upwards through each of the squadrons. Note that *WICHITA WITCH* has been fitted with the later style streamlined housing (developed by the Denver Modification Center) for the APQ-13 radar antenna. During its nine-month combat career, 42-24752 was commanded by Capt Robert Tisserat, 1Lt Richard D Covey and Maj John F Miller, before returning to the US war weary on 19 August 1945.

3

B-29-10-BW 42-6352 *FU-KEMAL* of the 676th BS/444th BG, Forward Base A-3, Kwanghan, China, December 1944

Flown by aircraft commander William H DeLacey, *FU-KEMAL* was originally assigned to the 679th BS. However, when the unit disbanded in October 1944, it was reassigned to the 676th BS. The aeroplane is seen in early CBI-style markings, comprising a yellow aeroplane number within a black diamond on the fin and a 24-in band in the squadron colour just forward of the side blisters. *FU-KEMAL* is equipped with an SCR-729 antenna (behind the cockpit), which was part of an early IFF interrogator system that was able to measure the range and bearing of other aeroplanes. *FU-KEMAL* still wears the winged bull badge of the 679th BS, and also boasts mission markers that credit it with the destruction of six ships and the completion of 12 combat missions and 35 'hump' trips. The 58th BW had to supply itself using its own B-29s, hauling fuel, ammunition and spare parts some 1200 miles from India to forward bases in China. Six round trips were required to gather enough fuel for one aeroplane to mount a combat mission.

4

B-29-45-BW 42-24720 *FU-KEMAL-TU* of the 676th BS/444th BG, West Field, Tinian, June 1945

On 30 August 1945 *FU-KEMAL-TU* ditched following a PoW supply drop – its crew was quickly rescued. The bomber wears late-style 444th BG markings comprising the 58th BW triangle (13-in high) and the group letter 'N' (55-in high), as well as individual aeroplane numbers on its fuselage sides and on the outer cowlings. The squadron colour is also used on the outer cowlings and prop bosses. *FU-KEMAL-TU* has the 676th BS badge applied to nose, the marking consisting of a dragon throwing a bomb. This aircraft also features three 'hump' and 41 combat mission markers. Finally, the seven black hearts beneath the bomb log represent combat missions where a crew member was injured, and therefore awarded a Purple Heart.

5

B-29A-10-BN 42-93857 *HELLON WINGS* of the 677th BS/444th BG, West Field, Tinian, May 1945

HELLON WINGS has a mission tally board crediting it with seven 'hump' trips, two reconnaissance flights and 23 bombing sorties. Its nose art was inspired by the 'January girl' in the 1945 Esquire calendar by Vargas, with the addition of a pair of angel's wings to denote her aeronautical 'canvas'. The name *TOM* below the cockpit refers to the aeroplane commander, Tom Welch, whilst the name *STRETCH* below the navigator's window refers to the nickname of 'nav' Robert K McKay. The names *AM* (red) and *FERN* (black) appear under the port sighting blister of Ambrose Reinhardt (left side gunner) whilst Bob McInerney (Radar Operator) has had the word *MAC* painted onto the national marking. Not shown is the legend *ASCEND POLIE* that appears under the tail gunner's window on the starboard side, denoting its occupant, Hugh Polson. Navigator 1Lt McKay remembers:

'*HELLON WINGS* was the third aeroplane assigned to Crew No 8 of the 444th BG's 677th BA in about November 1944. I flew ten bombing missions out of India and China, seven 'hump' crossings and the two photo-recon missions in this aircraft. We moved to Tinian at the end of April 1945, and from here I flew 13 more bombing missions in *HELLON WINGS*. The one I remember most was the fire-bombing of Tokyo from 9000 ft. Gen Curtis LeMay had just arrived, and he ordered our first B-29 low level night bombing mission. IP was Fujiyama, and we turned onto a 90-degree heading due east over the city, where the search lights lit up the sky. Bombs from other B-29s flying too high were coming down past us from above, and flak was bursting all around. After bomb release, the updraft of the fire was so great that we were thrust up 1000+ ft and thrown to our left, which was to the north, where we had been told not to go. The radar was working well, and it showed us we were crossing the northern end of Tokyo Bay. We took a heading south as soon as we got out of the action. Back at Tinian, we found very little damage to the B-29 except an oil leak in one engine that was hit and several small holes.'

6

B-29-1-BW 42-6223 Lady BOOMERANG of the 770th BS/462nd BG, Pairdoba, India, July 1944

Lady BOOMERANG was constructed as part of the first B-29 production block of 50 aircraft built by Boeing following completion of the 14 pre-production YB-29s. One of the original Superfortresses assigned to the 462nd BG, on 16 December 1943, its first aircraft commander was Capt Smith, who was later replaced by Capt J M Miller. The aircraft was lost whilst being flown by the latter crew when it ran out of fuel following a mission to Singapore on 23 August 1944. Two crewmen were killed in the crash-landing and *Lady BOOMERANG* was salvaged three days later. It was one of the few B-29s finished in the AAF's early war olive drab scheme – note that its wings have bare metal leading edges following the removal of their rubber de-icing boots. The bomber also has the early two gun upper forward turret and mixed 0.50-cal machine guns/20 mm cannon tail armament. Crews had been instructed to remove the cannon in September 1944, but some chose to retain them after that date. *Lady BOOMERANG* appears in the group's early CBI markings, its B-29s being adorned with 63-in aeroplane-in-squadron identifying letter codes located above the radio call number on the fin, whilst the rudders were painted with the squadron colour. When the units were reorganised in October 1944, all group aircraft had their rudders painted red, the squadrons then being indicated by a 4-ft number applied below the radio code – the 771st was disbanded at this time. *Lady BOOMERANG*, like other early 462nd BG B-29s, has its nose art applied on the starboard side.

7

B-29-5-BW 42-6299 *"humpin honey"* of the 770th BS/462nd BG, Chengtu, China, July 1944

B-29 *"humpin honey"* was accepted by the AAF on 10 January 1944, and delivered to the 462nd BG the following day at Walker Army Air Field, in Kansas. It departed the US on 10 April for assignment with the Twentieth Air Force, arriving in India six days later. It took part in the 7 December raid on the Manchuria Aeroplane Manufacturing Company, and an adjacent arsenal at Mukden – 80 B-29s hit the primary target, and ten others bombed a nearby marshalling yard. *Superfortress gunners claimed ten Japanese* fighters shot down, ten probably destroyed and 30 damaged for the loss seven B-29s, including *"humpin honey"*. The aircraft's right gunner, Sgt Walt Huss, remembers:

'We were rammed down over Mukden by a "Tojo" fighter piloted either by Sgts Tadanori Nagata or Yoshihiro Akeno of the 104th Sentai. Left gunner Sgt Ken Beckwith and I were the only survivors. My crew was, 1Lt A M Colby (pilot),

Lt Frank ODonnell (co-pilot), Lt Joe Kremer (navigator), 1Lt Mark Cleland (bomb aimer), 1Lt Charles Krueger (flight engineer), Sgt Raoul Zavala (radio operator), Sgt Herb Roth (radar operator), Sgt Charles Rudy (central fire control), S/Sgt Ken Beckwith (left gunner), Sgt Walt Huss (right gunner) and T/Sgt Ken Gwaltney (tail gunner).'

Both Huss and Beckwith were captured, and they spent the rest of the war in the Japanese PoW camp in Mukden.

8

B-29-10-BA 42-63393 *RUSH ORDER* of the 768th BS/462nd BG, Chengtu, China, November 1944

RUSH ORDER was first assigned to Maj Slack and his crew, and they commenced combat missions with the aircraft just 15 days after it was delivered, hence the aircraft's nickname. The bomber went on to survive the war, and was finally scrapped in 1949. However, Maj Slack and his crew were shot down by fighters over Bangkok on 6 January 1945 whilst flying B-29-20-MO 42-65254 (unnamed, tail code 'K'). That day XX Bomber Command launched its final mission against targets in Japan when it attacked an aircraft factory and urban areas in the city of Omura – the secondary target on this day was Nanking, in China. Forty-nine B-29s from the 58th BW were despatched from Chengtu, and they ran into heavy fighter opposition. Gunners claimed four kills, six probables and ten damaged for the loss of a solitary B-29. Maj Slack's *RUSH ORDER* is depicted in profile just before it transferred to Tinian with the group, where it remained coded 'I1'. At that time it had completed 12 combat missions and 18 'hump' trips – the manufacturer's 'B-19' code was removed so that the latter's tally could be applied.

9

B-29-50-BW 42-24801 *PHONY EXPRESS* of the 770th BS/462nd BG, Tinian, April 1945

PHONY EXPRESS was delivered to the 462nd BG on 21 October 1944 as a replacement aeroplane, and it later transferred to Tinian with the group. It is seen in profile with the late-style Tinian markings comprising the 58th BW triangle and the group letter 'U'. The group's distinctive red rudders were retained at the request of the then group commander. The *PHONY EXPRESS*'s flight engineer, Lt Rudy Thompson, remembers his aircraft's demise:

'Our crew did not have this aeroplane for too long – we got it on 7 March 1945 and lost it on 16 May. That night, Capt Abranovic's crew readied *PHONY EXPRESS* for a night fire-bombing mission to Nagoya. The captain went over the escape procedures in case of an emergency. As our crew had been together for over a year, we were familiar with this procedure, so this was not always done. As it turned out, it must have been fate that the captain decided to review escape plans before this flight. The take-off was normal, but immediately after we lifted off, at about 1200 ft, the right scanner reported fire coming from the No 3 engine. I immediately discharged both fire extinguishers into it, but by this time the flames were past the scanner's window and the extinguishers were having no effect. The captain rang the bail out bell and we all exited the aeroplane at about 1000 ft. Some of us landed in the water and the rest on land. The Fifth Fleet was in Saipan Harbor, and the captain stayed with the aeroplane until he made sure that it would not crash into any naval vessels. He left the aeroplane at about 400 ft, and his 'chute opened just in time – he landed in the water just off shore. Capt Abranovic was sent home, while the rest of us finished our 35 missions, except for the CFC, who broke his foot upon landing and was also sent home. The aeroplane crashed close to North Field and was completely burned out.'

10

B-29-25-MO 42-65276 *Raidin Maiden II* of the 793rd BS/468th BG, Kharagpur, June 1944

The 468th BG flew its first combined mission with the 58th BW on 5 June 1944 from Kharagpur to the railway marshalling yards at Bangkok. Its next raid was conducted ten days later, and this time the target was the Imperial Iron and Steel Works at Yawata – the first time B-29s had sortied to the Japanese home islands. The group went on to establish the best operational record within XX Bomber Command, and the 468th was rewarded for its efforts when it was presented with Gen Billy Mitchell's personal house flag in August 1944. The emblem created to mark this award appears on the fin of *Raidin Maiden II*, whilst the group's early CBI marking, which consisted of two 15-in-wide bands spaced 30-in apart can be seen on the rudder. Finally, the last three digits of the serial appear as an aeroplane identifier on the fin. Both *Raidin Maiden II* and *Raidin Maiden* (B-29-5-BW 42-6265) before it were piloted by Capt Joyce.

11

B-29-55-BW 42-24893 *Lil Organ Annie* of the 794th BS/468th BG, West Field, Tinian, July 1945

Lil Organ Annie was delivered to the AAF on 30 November 1944 and joined the 468th BG in India on 1 February 1945. It flew six combat missions in the CBI before transferring with the group to Tinian, from where it completed a further 25 combat missions. Surviving the war, *Lil Organ Annie* was finally scrapped on 12 November 1953. The bomber is depicted in Tinian-style markings, comprising the 58th BW triangle and the group letter 'I'. The significance of the outer cowling star motif is not known.

12

B-29-20-BA 42-63492 *LUCKY IRISH* of the 870th BS/497th BG, Isely Field, Saipan, March 1945

The second of pilot Lt W M Kelly's B-29s to bear the title *LUCKY IRISH*, 42-63492 survived the war. His first *LUCKY IRISH* (B-29-40-BW 42-24622, also marked A Square 26) failed to live up to its name when it had to be ditched by the Wagner crew

Field, Saipan on 31 October 1944. The aircraft went on to fly 52 missions, and survive the war. It is depicted here in the early-style 500th BG markings that the bomber wore when it arrived on Saipan.

19

B-29-25-MO 42-65296 *THE ANCIENT MARINER* of the 883rd BS/500th BG, Isely Field, Saipan, May 1945

THE ANCIENT MARINER, flown by Ray Clinkscales and crew, arrived on Saipan on 1 December 1944. After flying six missions in her, its original crew then flew a variety of B-29s until eventually being assigned B-29-80-BW 44-70113 *The Marylyn Gay*. *THE ANCIENT MARINER* went on to fly 52 missions, and having survived the war, it was scrapped in May 1954. Like *HELLON WINGS* and *BETTY BEE*, this aircraft was equipped with the 'Porcupine' equipment to jam Japanese radar defences. Primarily located on the underside of the rear fuselage, this equipment used a variety of blade antennae, and was operated by one or two specialist crewmen. Initially, few aircraft had this equipment, and those that did performed the jamming role for other B-29s, but as the war progressed more bombers received 'Porcupine'.

20

B-29-50-BW 42-24825 *Snooky* of the 24th BS/6th BG, North Field, Tinian, March 1945

Snooky was flown by Capt Clark Preston and his crew, and they became the first 6th BG asset to land on Tinian on 18 January 1945. *Snooky* was the nickname Capt Preston gave both to his daughter (Anita Preston) and his assigned aeroplane. On 7 April Preston and six members of his crew were killed when replacement B-29-30-MO 42-65347 crashed on take-off and exploded in the water some two miles off Tinian – four crewmen survived the incident. Preston and his crew had been forced to use this B-29 when repairs being carried out on *Snooky* remained uncompleted by mission time – there were more aircraft available than flight crews. *Snooky* survived the war, flying its last mission with the Holzclaw crew to the Mariku marshalling yards on Iwakuni on 14 August 1945. Both the names of Capt Preston and the B-29's crew chief, S/Sgt S E Spraggins, appear beneath the cockpit, together with nine red bomb mission symbols.

21

B-29-60-BW 44-69736 *LOOK HOMEWARD ANGEL* of the 39th BS/6th BG, North Field, Tinian, June 1945

LOOK HOMEWARD ANGEL is depicted in the revised 6th BG markings, which featured a 313th BW circle containing the group letter 'R', as well as the group colour red on both the tail tip and the engines' upper nacelles. This aircraft survived the war, and a crew attempted to ferry her back to the US. However, after four successive engine failures, it was abandoned on Kwajalein and eventually destroyed during fire training in mid-1946. A member of the bomber's combat crew was left' beam gunner S/Sgt William S Santavicca:

'We flew 42-24901 from the US, arriving on Tinian on 10 February 1945. We called it *Tropical Queen*, but it was assigned to another crew, and they renamed it *Cultured Vulture*. Our crew (No 3905, led by Capt John D Ralph) was assigned *LOOK HOMEWARD ANGEL* on 18 March, and we duly flew 14 of our 25 missions in it. While we were in Hawaii on R&R, our aeroplane was used by other crews, and on the night of 15 July Maj John Layson was air group commander on a mining mission to Rashin, in Korea. Soon after taking off, the crew discovered they would have to fly on extra power, cutting the fuel reserve. After dropping their mines one engine stopped and another started backfiring violently. They headed for Okinawa, where they became the first crew to land a B-29 on the Bolo fighter strip. "LHA" was repaired and returned to Tinian, and we flew it twice more. Our last mission was to Uji-Yamada on 28 July in *Rip Van Wrinkle* as the lead crew.'

22

B-29-25-MO 42-65286 *Dinah Might* of the 1st BS/9th BG, Iwo Jima, March 1945

The US Marines invaded Iwo Jima on 19 February 1945, and just two weeks later, on 4 March, Lt Raymond Malo made an emergency landing in *Dinah Might* on a runway still not fully under American control. The crew performed the emergency landing during their first combat mission due to fuel shortage caused by a malfunctioning fuel pump. They had been unable to close the bomb doors after attacking their target, and the extra drag this had caused resulted in excessive fuel consumption. Following hasty repairs, and some additional fuel poured in by hand, the aeroplane returned to Guam and went on to complete 42 missions, 18 of which were flown by its regular crew led by 1Lt Lloyd G Butler. The Malo crew, however, were one of four crews lost on the Kawasaki mission of 16 April 1945 whilst flying B-29A-10-BN 42-93893. Butler and his crew flew 35 missions to Japan, and were credited with several enemy fighters destroyed. During their 32nd mission – a daylight raid over Kobe – Japanese fighters converged on their aeroplane and made at least 30 attacks until they were 25 miles out to sea. The crew was credited with three kills and two probables on this occasion, but they too had to make an emergency landing on Iwo Jima. The aircraft survived the war and was later scrapped in the US in May 1946.

23

B-29-50-BW 42-24856 *GOIN' JESSIE* of the 5th BS/9th BG, North Field, Tinian, April 1945

GOIN' JESSIE was named by pilot Capt John D Fleming, whose crew flew it for 32 of its first 46 missions. The bomber completed 51 successive combat missions without an abort, totalling 700 combat hours over 135,000 miles. In that time it delivered more than 330 tons of bombs, and just happened to be the B-29 that dropped the 2,000,000th ton of bombs. Due to the bomber's outstanding maintenance record, its crew chief, M/Sgt Einar S Klabo, was awarded the Legion of Merit on 1 August 1945. *GOIN' JESSIE* is depicted in the revised 9th BG markings, featuring the 313th BW circle (12-in diameter) containing the group letter 'X', and the group colour white on both the tail and engine nacelles.

24

B-29-70-BW 44-69920 *T.N.Teeny.II.* of the 1st BS/9th BG, North Field, Tinian, July 1945

T.N.Teeny.II. is also depicted in late-style markings, with the addition of lead ship stripes. These were developed by the 313th BW in an effort to assist recognition, and were comprised, in this instance, of black and yellow bands (22 and 25 inches wide, respectively). *T.N.Teeny.II.* flew 27 combat missions, with four aborts. Eight of her missions were flown by Capt Leon Smith's crew, whose previous aeroplane – *T.N.Teeny.* – had been scrapped on 16 June 1945 after its 14th mission due to battle damage. Both aeroplanes were maintained by the same crew chief, M/Sgt Johnson. James A Boyce initially served as the left blister gunner in Capt Smith's crew, before joining Lt Eugene Brown's crew. He completed 33 missions in total, flying both in *T.N.Teeny.* and *T.N.Teeny.II.* – he and crewmate Ario Welch painted the nose art on both aeroplanes. *T.N.Teeny.II.* survived the war and was eventually scrapped in October 1953. The aeroplane's nose bears 14 bombing and ten missions. The 9th BG's first mining mission was flown on 27 March 1945 over the vital Shimonoseki Straits between Honshu and Kyushu. 313th BW B-29s dropped aerial mines by parachute from between 5000 and 8000 ft at night as part of Operation *Starvation*, which was intended to disrupt shipping servicing the Japanese war effort. By war's end this campaign was responsible for sinking 1,250,000 tons of shipping, and almost entirely halting sea traffic in and around the home islands.

25

B-29-50-BW 42-24863 *LUCKY LADY* of the 398th BS/504th BG, North Field, Tinian, March 1945

LUCKY LADY was initially commanded by Lt Benney, followed by Capt Cole, the bomber flying 35 missions in total. Its only aborted flight came on the 24th mission. *LUCKY LADY* is depicted in early 504th BG markings, comprising the group letter 'E', the 313th BW triangle and aeroplane number '12' on the fin. Its nose art was faithfully reproduced on both port and starboard sides.

26

B-29-25-MO 44-65280 *DINA MIGHT* of the 421st BS/504th BG, North Field, Tinian, June 1945

On 26 June 1945 510 B-29s, escorted by 148 P-51s, flew a combined raid to various targets in southern Honshu and Shikoku. The 504th BG's target was the Aichi aircraft factory at Eitoku, in Nagoya. A solitary P-51 and six B-29s (two from the 504th BG) were lost, including *DINA MIGHT*, commanded by Capt Bill Pitts. The bomber was shot down by fighters on the crew's 25th mission, and although Pitts and six of his crew survived, four were killed.

27

B-29-25-BA 42-63517 *Pokahontas/Princess Pokey* of the 482nd BS/505th BG, North Field, Tinian, April 1945

Pokahontas wears early 505th BG markings, comprising the group letter 'K', the 313th BW triangle and the aeroplane number '14', all of which are located on the fin. Its radio call number has also been retained. *Pokahontas* was one of the original 15 B-29s supplied to the 482nd BS, and it was first assigned to John Kretzer. On the night of 13 April 1945 the aircraft was lost during a mission to the Tokyo arsenal. Flown by the Locks crew, it was one of seven B-29s lost from a XXI Bomber Command force of 327 B-29s that dropped 2120 tons of bombs. Mary Reynolds was related to one of the crewmen on *Pokahontas*:

'My uncle, 2Lt John J McFadden, was the navigator on *Pokahontas*. This aeroplane originally wore the number 14, but because my uncle had had such good luck with the number 13, they asked permission for it to be changed. So when it was shot down, it was "No 13". The name *Pokahontas* was only painted on the plane about three weeks before it was lost. *Princess Pokey* was a nickname that the crew gave her, but it was never painted on the B-29. On the starboard side of the nose they had a picture of a bulldozer driven by an African-American – these guys took care of their runways and they wanted to let them know that they appreciated their work. The crew also had an altar set up inside the plane where they prayed before take-off and when they returned. Eugene Dymek, the bombadier, had been sent home on emergency medical leave, and he got back to Tinian the day his crew was reported missing. They were shot down near Saitama Prefecture, a suburb of Tokyo, whilst returning to Tinian. Only two bodies were recovered, and the remains of what they think were the rest of the crew were brought back to the US for burial in St Louis, Missouri, in three caskets.'

28

B-29-50-BW 42-24850 *BAD MEDICINE* of the 482nd BS/505th BG, North Field, Tinian, June 1945

BAD MEDICINE flew 18 missions with the Cook crew which, unusually, stayed together from training to war's end, flying every mission together. By the time they had returned stateside for lead flight training, this aeroplane boasted no fewer than 125 individual sheet metal patches covering flak holes. All this extra metal caused considerable drag, ruining the B-29's aerodynamics, and making it the slowest aeroplane in the group. When the Cook returned to Tinian, they discovered that *BAD MEDICINE* was being used for ferry duty between the islands. The war-weary B-29 was eventually flown to Warner Field in Georgia, before being dropped from the inventory.

29

B-29-45-MO 44-86292 *ENOLA GAY* of the 393rd BS/509th CG, North Field, Tinian, 6 August 1945

Arguably the most famous warplane in history, *ENOLA GAY* is shown here as it appeared when it dropped the first atomic bomb on Hiroshima at 0915 hrs and 15 seconds (time of detonation) on 6 August 1945. Col Paul W Tibbets, CO of the 509th CG, was the aeroplane commander for the mission. All of the 509th's B-29s (codenamed *Silverplate*) were produced by Martin in its Omaha plant, and were unique in having many modifications. These included the addition of pneumatically-operated bomb doors (to facilitate a quick exit from the target area), Curtiss reversible pitch propellers (cuffed for extra cooling) and the removal of turrets and sighting blisters, leaving only the tail armament for defence. The side sighting blisters were replaced by a flat plate incorporating a small window. Once in-theatre, the 509th CG used the markings of other B-29 groups to conceal its special purpose from the Japanese. *ENOLA GAY* was marked with the 'circle R' of the 6th BG, but at the time of the Hiroshima mission lacked the red fin tip associated with that group. Despite *ENOLA GAY* being the assigned aircraft of Capt Robert A Lewis, it was named for Tibbets' mother – the titling was painted onto the nose of 44-86292 just hours before its historic mission. Close inspection of the publicity shots taken immediately after the mission reveal that the name and aeroplane number were both quickly repainted, appearing in a more refined script.

30

B-29-35-MO 44-27297 *BOCKS CAR* of the 393rd BS 509th CG, North Field, Tinian, August 1945

Piloted by Maj Charles Sweeney, CO of the 393rd BS, *BOCKS CAR* dropped the second atomic bomb on Nagasaki on 9 August 1945. Codenamed 'Fat Man', this was a plutonium-based device that was much more powerful than the uranium-based 'Little Boy' delivered by the *ENGOLA GAY* three days earlier. The aircraft was assigned to Frederick C Bock, hence its name. *BOCKS CAR* appears in fake 444th BG markings, complete with the coloured fuselage band associated with that group.

31

B-29-65-BW 44-69872 *WHITE'S Cargo* (*City of Oakland*) of the 30th BS/19th BG, North Field, Guam, May 1945

WHITE'S Cargo had the distinction of flying 35 missions with no aborts on its original engines, and with the same crew. Arriving on Guam with the 314th BW in mid-January 1945, the 19th BG flew its their first mission (to Tokyo) on 25 February and its last mission (to Isesaki) on 14 August.

32

B-29-55-BW 42-24917 *NIP ON ESE*/ *"NIPPER"* of the 6th BS/29th BG, North Field, Guam, August 1945

NIP ON ESE, commanded by Capt Frank 'Red' Klassen, flew 40 combat missions, and was eventually written off in a landing accident on 2 November 1945. The aircraft's tail is marked both with the 29th BG's letter 'O' and the bomber's full serial number. Again, the only squadron identifier was the aeroplane's individual number – here, the '8' reveals its assignment to the 6th BS. All 314th BW B-29s were given a 'City of' name that was applied to the starboard side of the nose, whilst a more individualistic name and nose art was allowed on the port side. A white flag incorporated the actual 'City of' name, and its flagpole pointed to that city's location in the US. The city names were chosen by the crews, as Alexander 'Sandy' R Amell, navigator on *City of Springfield* (6th BS/ 29th BG) remembers:

'After we had flown several missions, a directive came down from 314th Wing HQ stating that all aeroplanes were to be named "City of", and that the specific city was to be picked by the crew. If the aeroplane had been previously named, the original name could remain on left side, thus *NIP ON ESE* also carried the name *City of Oklahoma City*. We had not chosen a name for our aeroplane before the "City" edict was issued, so all of our crew put suggestions in a hat and we drew one out. Our bomber therefore became *City of Springfield* after Springfield, MA, chosen because both the tail gunner and I were from that area. Not a very inspired name, but a good aeroplane that got us through 35 missions.'

33

B-29-30-MO 42-65367 *BATTLIN' BITCH II*/*CITY of MIAMI* of the 60th BS/39th BG, North Field, Guam, May 1945

BATTLIN' BITCH II wears the 39th BG's letter 'P' on its tail, together with a black band representing a lead ship aircraft. The bomber's radar observer, 1Lt Marvin Demanzuk, remembers:

'The port side nose art of *BATTLIN' BITCH II* took the form of a muscular blonde stoneage female, attired in leopard skin, wielding a huge war club. We chipped in $10 apiece to commission the work, which was completed before our departure from Salina. On our arrival in Guam, we were told to rename our aeroplanes for US cities, and that the nose art would be replaced with the city emblems. This met with strong opposition from the crews, and some bizarre city names were submitted like Increase, Mississippi, and Intercourse, Pennsylvania! A compromise was reached and the aircraft now had two IDs – *CITY of MIAMI* aka *BATTLIN' BITCH II. BATTLIN' BITCH I* was a B-24 Liberator flown by our aeroplane commander, Capt John H Keene, during his tour in the CBI.

'For the 25 May 1945 strike on Tokyo, *CITY of MIAMI* flew as a pathfinder, and we were one of those most severely damaged by flak whilst flying through Japanese searchlights, rockets, balls of fire and fighter attacks. We were hit both before and after we had dropped our load of incendiary bombs that helped identify the target area for the aircraft behind us. With two engines gone, we were too damaged to make it back to base, so we headed for Iwo Jima, the traditional short stop for damaged aircraft. This time bad weather prevented its normal use, and we were the only B-29 that made it into Iwo. We were put up in tents provided by the Marines. That night the Japanese, who were still a viable force on the island, penetrated the perimeter guard in an attack on our bivouac area. We drew our 0.45s and ran to assist the Marines, who chased us back into our tents. They later told us that the Japanese knew there was a crew that had taken part in the raid staying at the camp, and that we were their target. There had been extensive structural damage done to our aeroplane, so it was scrapped.

'When we got our second *BATTLIN' BITCH II,* the Amazon nose art was not renewed on the left side of the aircraft. From then on we led a charmed life, and did not suffer as much as a scratch. We completed 25 missions in the two aircraft, the last of these being to Mito on 2 August 1945, and we left the next day for a spell of leave in Hawaii. The war ended two weeks later, leaving us marooned on Oahu. We returned to the mainland via a Liberty ship, and never went back to Guam. There have been photos circulated of *BATTLIN' BITCH II* parked at Wing HQ at North Field, and on the left side of the fuselage are the insignia of the four groups comprising the wing. The assumption is that the plane was commandeered by wing when it became clear that our crew was not returning.'

34

B-29-60-BW 44-69800 *CITY of SAN FRANCISCO* of the 458th BS/330th BG, North Field, Guam, March 1945

CITY of SAN FRANCISCO was assigned to crew No 813, commanded by Capt Raymond B Smisek and piloted by 2Lt Robert C Woolson. Within B-29 crews, the pilot was referred to as the 'aircraft commander' and the co-pilot was known as the 'pilot'. The Smisek crew flew their first, and longest, mission (18 hrs 20 mins) to Koriyama on 12 April 1945, and their 21st, and last, was to Kamagaya on 1 August (14 hrs 10 mins). Smisek was awarded the Air Medal with Oak Leaf Cluster and a DFC during his four months of combat. *CITY of SAN FRANCISCO* flew 26 missions and later served in Korea with the 344th BS/98th BG as *Beetle Bomber*. It was scrapped in the late 1950s.

35

B-29B-35-BA 42-63688 *LOADED Dice* of the 15th BS/16th BG, North Field, Guam, April 1945

The 315th BW was the last B-29 wing to be activated and see action during World War 2. Given the role of bombing the Japanese petroleum industry by night, the 315th was equipped exclusively with B-29Bs, which differed from the A-model in a number of ways. The aeroplanes were built without turrets, leaving just the tail armament for defence. The new APG-15 radar was fitted as standard for use with the tail guns (note the antenna beneath the gun muzzles). Another important difference was the addition of the new APQ-7 'Eagle' radar, this unit using a much higher frequency than the APQ-13 which meant that it could be used for precision bombing at night. A less obvious change was the addition of a small flat side window instead of the side blisters, the latter being unnecessary due to the lack of turrets. *LOADED Dice* was delivered to the AAF on 24 March 1945, and left for Guam on 31 May. Here, it joined the 16th BG. Surviving the war and returning to the US, the aircraft was finally scrapped on 4 December 1953.

36

B-29B-30-BA 42-63610 *BUGGER* of the 355th BS/331st BG, Northwest Field, Guam, June 1945

The 331st BG made use of the 315th BW diamond and group letter 'L', the group being comprised of the 355th, 356th and 357th BSs. *BUGGER* left the US for Guam on 9 June 1945 and survived its brief time in combat. It returned to the US on 1 December 1945 and was placed in storage.

37

B-29B-35-BA 42-63640 *The BOOMERANG* of the 21st BS/501st BG, Northwest Field, Guam, August 1945

On 14/15 August 1945 the 315th BW flew the last bombing mission of World War 2. Jim B Smith participated in this historic event as radio operator on *The BOOMERANG*:

'The radar operator, Dick Ginster, said we were over Tokyo and I looked out to see. Tokyo was hidden in total blackness, and I knew that one of the 132 B-29s participating in this mission had triggered Tokyo's early radar warning system. Unbeknownst to us, the blackout had been instigated as part of a military revolt, whose objectives were to kidnap the Emperor, hold him incommunicado and issue orders to continue the war. One hour and eighteen minutes later we sighted our Nippon Oil refinery target that was located 270 miles to the north-west. Our navigator, Tony Cosola, and radar operator Ginster had done a good job. Hellish fires ignited by B-29s that preceded us shot fireballs heavenward, reaching 25,000 ft. Japanese nightfighters followed the searchlights, trying to get a hit on our big bird. A *kamikaze* zipped by our nose slightly off the mark. Sid Siegel manned our only firepower in the tail, while the two scanners, Hank Leffler and Henry Carlson, watched for fighters. The violent thermals wrestled with our B-29, threatening to flip us over on our back. Flying at just 11,000 ft, we wouldn't have had a chance to recover.

'Dick Marshall, the bombardier, toggled off our 20,500-lb bombload, and we took evasive action to get out of there. The elements finally released us and we headed for home. We were two hours from touchdown at Northwest Field when President Truman radioed the official end of the war. Our celebration stopped short when all four of our engines began backfiring from fuel starvation. We had the best B-29 engineer alive, Hank Gorder from North Dakota, so we had a chance. Our aircraft commander, Carl Schaher, figuring the good possibility of having to crash land in the water short of the Northwest runway, ordered the crew to ditching positions. Carl and co-pilot, John Waltershausen, tightened their shoulder harnesses. We made it by only "a wing and a prayer". No 3 shut down on the way back to the hardstand – out of gas!'

The BOOMERANG was so named in the hope that this B-29 would also always come back, the crew (No 29) taking a real boomerang with them on each of their missions as a good luck charm. The nose art was added after the application of its black undersides – the latter finish (originally developed for nightfighters) was factory-applied, this glossy paint being known as 'jet'. As with similarly finished B-29s, the bomber's wing underside national insignia was painted over.

38

B-29B-30-BA (serial unknown) *OH BROTHER!* of the 411th BS/502nd BG, Northwest Field, Guam, May 1945

The 502nd BG arrived at Guam between April and June 1945, and entered combat on the last day of the latter month when it bombed Japanese-held Rota. The group flew its first mission against the Japanese home islands on 15 July, focusing on the enemy's petroleum industry. The 315th BW as a whole was responsible for the destruction of 83 per cent of Japanese oil refining capability. Successful as it was, this campaign had little impact on the war, for Japan relied on oil imports by sea, which had by this time been virtually stopped by the American blockade. *OH BROTHER!* was assigned to the 411th BS, its nose art depicting a drunk *Mickey Mouse* reclining in a cocktail glass. The names *Willie Wolf* and *John + Dot* appeared adjacent to crew stations.

39

F-13A-BN 42-94114 *Wild WESTY'S WABBITS* of the 3rd PRS, Harmon Field, Guam, July 1945

The 3rd PRS was initially based on Saipan, before moving to Harmon Field, on Guam. The first two F-13s arrived at Saipan on 30 October 1944, and the unit eventually had ten aircraft assigned to it, although these were often detached to regular bomb groups. The unit identified bombing targets and performed post-strike damage assessments, flying missions as lone aircraft without any fighter escort. *Wild WESTY'S WABBITS* was commanded by 1Lt George L Westenberger, who had assumed command of this crew from previous aircraft commander 1Lt Oran K Woodfin. The new crew's first mission was flown on 10 April 1945 to Kushira, Kokubu, Izuma, Sasebo and the Shimonoseki Straits. Their last mission was flown on 28 July to the west and north coasts of Kyushu, the south-west coast of Honshu and the north coast Shikoku. Westenberger and his crew returned home in early 1946, and this aeroplane was subsequently lost when it crashed on take-off on 11 June 1946, killing all on board.

Back Cover

B-29B-30BA (serial unknown) *For The Luvva Mike!* of the 21st BS/501st BG, Northwest Field, Guam, June 1945

The aircraft commander of this anonymous B-29 was Chuck Miller:

'I remember that it wasn't all fun and games, and these memories still haunt me. I remember the flights over Kawasaki and the green radar light that caught us on the start of our run – 12 minutes of terror that seemed an eternity. Looking at each other in the cockpit with our ghastly green complexions from the light, watching the tracers coming up from the ground and the feeling of the flack bursting under us. Al Ham, our bombardier, calling out the enemy gun emplacements until we finally had to shut him up. Finally it was over, "Bombs Away!", and we got the hell out of there.

'When we arrived back at Northwest Field, we examined the B-29 for flack holes – nary a one. Guess who caught all of our flack? Lucky Dan Garret, who had been just behind, feeling sorry for us catching the green light and all the fire, only to find out that they missed us and hit him!

'Then there was that horrible storm that caught us on a return flight. We were tossed around like popcorn in a skillet. Up 3500 ft, down 5000 ft, wings bowing like a flapping pigeon. We tried to get under it, but it was all the way down to the sea. We tried to get over it, but at 45,000 ft we were mushing and still not out of it. It was then that I asked Danny Krawetz, our able flight engineer, to lead the prayers because he was the only one that went to mass. There is a God! He was with us this night, as he was so many times. All of the emergency gear in the aft portion had torn loose and was being thrown around, and no one dared to unfasten a seat belt lest he be tossed around with the gear. Thank your dear God! We made it back.

'Then there was the landing fiasco when we returned to Northwest amidst a violent rain squall. We were instructed to circle and hold until the squall passed over. Finally, we were cleared to land, but the holding pattern had grown so large with all the returning aircraft that there was a scramble for clearance in. We had made three go arounds when our No 3 engine began throwing oil, but the prop would not feather and kept running away. We "Maydayed" the tower for emergency clearance, but whoever was on the approach in front of us would not pull up and go around. There was only one thing left to do as there could be no more go arounds for us. I put the bomber in a dive, flew below the cliff at the end of the island, came up in front of the other aeroplane and landed safely.'

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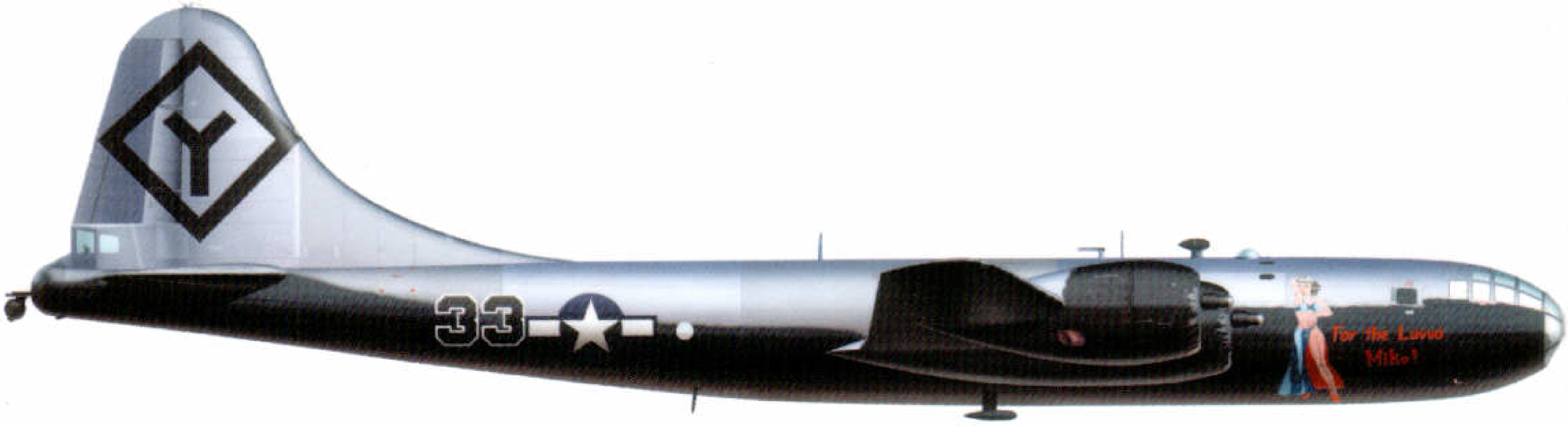
B-29 SUPERFORTRESS UNITS OF WORLD WAR 2



The ultimate piston-engined heavy bomber of World War 2, the first production B-29s were delivered to the 58th Very Heavy Bomb Wing in the autumn of 1943. By the spring of 1944 the Superfortress was bombing targets in the Pacific, and by war's end the aircraft had played as great a part as any weapon in ending the conflict with the Japanese. Indeed, the final dropping of two atomic bombs from specially-modified *Silverplate* B-29s convinced the Japanese to sue for peace. This volume details the aircraft's combat history with the five bomb wings that flew the B-29 from bases in China, India and the Pacific islands. It includes a wealth of first-hand accounts, 40 all-new colour profiles supported by in-depth plates commentaries, a three-page nose art gallery, 1/144th scale drawings and more than 80 black and white photographs of the mighty Superfortress in combat.

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